CONTRACTING NEWS

Of Special Interest to Engineers, Contractors, Builders and Manufacturers of Engineering and Building Supplies

Where name of official is not given inquiries should be addressed to City Clerk, County Clerk or corresponding official.

WATER-WORKS

Proposed Work

Mass., North Adams—City Council voted appropriation of $10,000 for extension to water mains. A. Conlon, supt.

N. Y., Rochester—City plans to construct 7,000,000-gal. reservoir in connection with water system at Kodak Park.

N. Y., Tonawanda—Citizens of North Tonawanda and Tonawanda voted $80,000 and $110,000 bonds respectively to enlarge lower intake mains in Niagara River.

Md., Brunswick—City voted $75,000 bonds for water-works.

Md., Frederick—City defeated $75,000 bonds for water-works.

Ga., Thomasville—City election May 8 to vote on $160,000 bonds for improving water and light plant, extending mains and paving streets and sidewalks. A. A. Riley, clk.

Fla., Smyrna—City voted $10,000 bonds for completion of water-works.

Ala., Birmingham—City plans building addition to water-works and power plant with $50,000 bonds recently voted. H. H. Horner, supt.

Ala., St. Bernards—City having plans prepared for water softening plant and improvements to power house, $90,000 bonds recently voted for this work.

Ala., Talladega—City sold $145,000 bonds to build water-works.

La., Monroe—City voted following bonds: $146,000 for filter plant and reconstruction of water-works; $60,000 surface drainage; $100,000 sanitary sewers; $61,000 for power house and improving of electric generating plant; $61,000 street improvements. Walter G. Kirkpatrick, Jackson, Miss., engr.

Tenn., Benton—City to issue $50,000 bonds for improving water-works.

O., Dayton—City soon lets contract 3-story, 17 x 17-ft. storm water pumping station, Germantown St., About $14,000. H. Collin, supt.

—City plans improvements to water-works. Metcalf & Eddy, 14 Beacon St., Boston, Mass, engrs.

O., Defiance—City considering installation of pure water supply system. C. Kuhn, supt.

O., Hubbard—City planning $12,000 bond issue for water-works.

O., Piqua—City ordered by State Bd. Health to install water purification system or new water supply. Contract will probably be let in July. W. Zimmerman, supt.

O., Sharon—City election May 15 to vote on $58,000 bonds for water-works.

Ind., Kendallville—See "Streets and Roads."

Mich., Lansing—Electric Light and Water Dept. plans to lay about 8-mi. water mains; cost $50,000. G Crane, mgr.

Mich., Mendon—City plans to install water-works. Cost, $17,000. A. D. Smith, 332 Nasby Bldg., Toledo, engr.

Ill., Joliet—City plans laying water mains and sewers in portions of Raynor and Whitney Aves. J. D. O'Callahan, city engr.

Wis., Strafford—Village will vote on $16,000 bonds for water-works.

Wis., West Allis—City retained Mead & Seastone, Madison, to assist E. G. Orbert, city engr. to prepare plans and submit estimate of cost of installing water system.

Ia., Marshalltown—City plans to build water-works. J. J. Wilson, city clk.

Ia., Oskaloosa—City plans building water-works.

Ia., Waverly—City voted in favor of issuing $15,000 bonds for water-works improvements.

Ia., West Point—City sold $15,000 bonds to build water-works.

Minn., Minneapolis—K. E. Alexander, city pur. agt., soon lets contract, furnishing at new filter plant, 8 12-in., 16 20-in., 8 24-in., 8 30-in. hydraulic gate valves; 8 20-in., and 2 each of 4- and 6-in. hand operated gate valves.

Kan., Caldwell—Town voted $80,000 bonds to improve water and light plant. F. O. Kerr, comr. pub. utilities.

Kan., Lawrence—City sold $15,000 bonds for water improvements.

Kan., Topeka—City plans sinking 3 wells at water-works, cost from $6000 to $10,000 each. J. Shaw, supt.

Neb., Scobey—Village defeated $19,000 bonds for water-works.

Wyo., Hudson—City sold $30,000 bonds for water improvements.

Mont., Helena—City plans to spend $20,000 extending water system.

Mo., Huntsville—See "Sewers."

Mo., Kansas City—City having plans prepared by W. B. Rollins & Co., engr., Midland Bldg., for water-works system; cost $20,000.

Mo., Kirksville—Election May 4 to vote on $118,000 bonds for improvements to water-works and electric-light plant.

Ark., Greenwood—Coal Dist. Power Co., Lawrence, planning building water-works at Greenwood, Booneville, Hartford, Huntington and Mansfield. H. Means, pres.

Tex., Corsicana—City election Apr. 30 to vote on $50,000 bonds for water system. Noted Apr. 5.

Okla., Bixby—City lets contract in June for water and sewerage systems. About $25,000 and $20,000 respectively.

Okla., Buffalo—City authorized $15,000 bond issue to build water system.

Okla., Okmulgee—See "Sewers."

Ariz., Wickenburg—City voted bonds to build water and light plant.

Wash., Seattle—See "Sewers."

Cal., Martinez—City plans to construct water-works and sewerage systems. Cost, $100,000. Olmsted & Gillelen, engrs., 1112 Hollingworth Bldg., Los Angeles, preparing plans.

Cal., San Diego—See "Reinforced Concrete."

Ont., Amherstburg—Brunner Mond Co. of Canada, subsidiary of Solvay Process Co. of Detroit, will install water-works plant for town on account of Provincial Bd. Health not allowing company to discharge its waste water above intake of present system, plans include filtration and purification plant.

Sask., Regina—City plans to construct pump house for Boggy Creek; cost, $10,000. J. R. Ellis, 2852 Rae St., act. engr.

Alta., Redcliffe—Town plans laying about 1 mi. 10-in. steel or c.i. pipe and install pumping plant.

Bids Desired

Wis., Milwaukee—(Official)—Until May 2 by Dept. Pub. Wks. for pumping engine; advertised in Apr. 12 issue.

Minn., Wadena—Until Apr. 23 by A. C. Murray, village clk., for water-works extensions, in all about 11,300 ft. 4- and 6-in. mains, hydrants, valves, etc. G. S. Hughes, supt.

Kan., Geuda Springs—(Official)—Until Apr. 23 by City for water-works system consisting of 13,500 ft. c.i. pipe, specials, valves, elevated tank, etc.; sewer system of 9000 ft. 8 and 10 in. vitr. pipe, manholes, etc. R. Ward, clk. Benham Eng. Co., Colcord Bldg., Oklahoma, engrs.

Prices and Contracts Awarded

(★Indicates award of contract)

★Mass., Boston—Edw. F. Murphy, comr. pub. wks., let contract, relaying water pipe on N. Grove St., to M. De Sisto, 198 La Grange St., West Roxbury; various streets in Brighton and Dorchester to J. Guarino & Son, 45 Brook Ave., Roxbury.

★N. Y., New Windsor—City let contract reservoir to Harper & Higginson, 56 2d St., $12,000.

N. Y., New York—C. Strauss, supt. water supply, Municipal Bldg., received low bids, cont. 176, furnishing and erecting about 3½ mi. spiral cloth or chain link wire fencing and about 1 mi. rein.-con. guard rail. at Hill View Reservoir, in Yonkers and Silver Lake Reservoir, Boro. Richmond, as follows: Lupfer & Remick, 595 Ellicott Sq., Buffalo, $57,310; Hyman & Goodman, $59,070; P. T. Cox., Co., 154 Nassau St., $66,530.

★N. J., Bayonne—City Comrs. let contract water mains in Hobart and Isabella Ave. and 5th and 6th St. to C. T. Kavanagh, West 23rd St., New York, $68,359.

O., Greenwich—(Official)—City received only bid improving water-works from Alger & Krans, 416 Guardian Bldg., Cleveland, $17,987.

★O., Lakewood—W. H. Evers, engr., Arcade Bldg., Cleveland, let contract water mains to G. Contose, 2478 East 95th, Cleveland.

★O., Mt. Vernon—Bd. Control let contract 1200 water meters to Gamon Meter Co., 282 South St., Newark, at $7.50 each.

★O., Ravenna—City let contract to B. C. Coit, Cumberland, Md., water-works improvements. J. S. Mallette, supt.

★Wis., Madison—Water Bd. let contract laying water mains to J. F. Icke, $18,752.

★Neb., Scotts Bluff—City let contract extending water system to J. S. Schwartz, Colorado Springs, $26,250.

Mont., Big Sandy—See "Sewers."

Cal., Los Angeles—See "Reinforced Concrete."

SEWERS

Proposed Work

Mass., Ludlow—City plans to construct sewerage system. C. E. Quinby, city engr.

Conn., Stratford—City plans to issue $125,000 bonds for sewerage system.

N. Y., Niagara Falls—City plans to lay sewers in portions of Buffalo Ave. W. B. Bennett, Convention Hall, engr.

N. J., Paulsboro—City plans sewerage system to consist of about 8 mi. 6- to 8-in. c.i. pipe; cost, $75,000.

N. J., Perth Amboy—See "Streets and Roads."

N. J., Stone Harbor—Council adopted plans for sewage disposal plant, cost, $12,000.

Pa., Morrisville—City plans building sewerage system and sewage disposal plant.

Pa., Newport—See "Streets and Roads."

Pa., Phila.—City plans new sewage-disposal plant at Frankford. C. Albright, city engr.

Ala., Lafayette—City will let contract about July 1 for sewerage system.

O., Cleveland—City plans to install sewer in portion Eastern Ave., S. E. R. Hoffman, city engr.

City plans to install vitrified pipe sewer in portion of East 133rd St. R. Hoffman, city engr.

O., Hillsboro—A. E. Kimberly, engr. estimates cost of installing sewers at $20,000 per mi., total not exceed $100,000.

O., Wilmington—City election Apr. 24 to vote on $75,000 bonds for sewerage system.

Mich., Escanaba—City voted in favor of $30,000 bond issue for new trunk line sewer from Ludington St. to sewage disposal plant. W. J. McDonald, city engr.

Mich., Grand Rapids—Bd. Pub. Wks. rejected bids for sewerage system. About $160,000.

Ill., Lombard—Bd. Local Improv. soon lets contract sewerage system consisting of 10,950 ft. rein.-con. pipe 30 to 54-in. 46,000 ft. tile pipe 12- to 24-in. manholes, catch basins, etc.; cost $165,000.

Wis., Kilbourn—Village adopted resolution to issue $20,000 bonds for sewerage system.

Wis., Osceola—City plans sanitary sewer and water supply systems. About $35,000. A. Ladd, city clk., L. P. Wolff, 1000 Germania Life Bldg., St. Paul, Minn., engr.

Ia., Coon Rapids—(Official)—Town retained C. E. Wilson, engr. Gamble Blk., Perry, to make plans sewerage system.

Ia., Grand Mound—City plans disposal plant and about 3 miles of sewers. Iowa Eng. Co., Chase Bldg., Clinton, engrs.

Minn., St. Paul—City will soon let contract sewers in Dunlay, Maury and 7th Sts. O. Claussen, city engr.

Neb., Ogalalla—City soon lets contract installing sewers in lateral sewer Dist. D and B.

S. D., Beresford—City having plans prepared by Dakota Eng. Co., Mitchell, for sewerage system.

Mo., Huntsville—City plans sewer and water system. About $50,000. E. T. Archer & Co., engrs., 514 New England Bldg., Kansas City, made plans.

Mo., Mexico—City voted $12,000 bonds for sewer improvements. Black & Veatch, 507 Inter-State Bldg., Kansas City, engrs.

Sewers (Continued)

Tex., Dallas—City plans to install sewage disposal plant. Cost, $30,000. H. Mosley, city engr., preparing plans.

Tex., McAllen—City plans election to vote on $30,000 bonds to install sewerage system.

Tex., Yorktown—City plans sewerage system. Surveys now being made.

Okla., Buffalo—City plans to install sanitary sewerage system. About $25,000.

Okla., Jenks—Property owners voted $12,000 bonds for sewerage system.

Okla., Oklahoma—City will soon let contract for sewer, cost about $200,000.

Okla., Okmulgee—City plans to install sewers and water system. Benham Engineering Co., Colcord Bldg., Oklahoma City, preparing plans.

Utah, Ogden—City plans election to vote on $300,000 bonds to install sewers in 3rd Ward and $50,000 to pave streets. J. M. Tracy, city engr.

Wash., Seattle—City soon lets contract for installing sewers and watermains; cost about $25,790. A. H. Dimock, city engr.

Cal., Los Banos—City plans to build sewerage system; cost, $30,000. Olmsted & Gillelen, engrs., 1112 Hollingworth Bldg., Los Angeles, engrs.

Cal., Martinez—See "Water-Works."

Ont., Toronto—Works Com. considering rebuilding sewer on Marguerette St.; cost $20,000.

Ont., Woodstock—City plans to construct sewerage system. Cost, $154,000. W. Chapman, Toronto, engr.

Bids Desired

N. Y., New York—Until Apr. 26 by D. Mathewson, boro. pres., Municipal Bldg., Crotona Park, Tremont and 3rd Ave., Bronx for installing sewers and appurtenances in portion West 183rd St. and Van Cortland Park S., for steps from Tremont Ave. transverse road to easterly side of Grand Blvd. and Concourse, regulating, grading, setting curb, laying sidewalks and crosswalks, building inlets, receiving basins, drains, culverts, approaches, and guard rails where necessary in Bronx Blvd.; paving with sheet asphalt and granite block on concrete foundation portion of Franklin Ave. and setting curbs where necessary; repaving with sheet asphalt on concrete foundation portion Southern Blvd.; Crotona Park, and setting necessary curbs; paving with sheet asphalt portion of Wilkins Ave., and setting curbs where necessary, and repaving with granite blocks on concrete foundation portion of Hunts Point Ave.

Until Apr. 27 by M. M. Marks, boro. pres., Municipal Bldg., for alteration of receiving basins, with inlets in portion Scammel St. and northwest and southwest corners of 1st and 2nd Ave. and 13th St., portions of 3rd and 6th Ave. Catherine, McDougal and Prince St.

N. Y., White Plains—(Official)—Until May 7 by Harvey Green, clk. Bd. Supervs., for sewer in Quincy Pl.

Pa., Phœnixville—Until May 5 by Sewer Com. for sewer on portion of Gay St.; advertised in this issue.

N. C., Beaufort—Until Apr. 20 by C. H. Bushall, city clk., for about 5 mi. sewers with electric pumping station.

O., Centerburg—(Official)—Until May 4 by N. C. Smith, village clk., for furnishing material for and building sewage disposal plant and sewers. Richards Eng. Co., 37½ East Long St., Columbus, engrs.

O., Lakewood—Until Apr. 25 by N. C. Cotabish, dir. dept. pub. wks., for lake outlet section of outfall sewer; advertised in this issue.

Ia., Bedford—Until Apr. 23, by city for 2568 ft. 12-in. outlet sewer, Imhoff tank, sludge beds, chambers, etc.

Kan., Geuda Springs—See "Waterworks."

Mont., Bozeman—See "Streets and Roads."

Wash., Sedro Wooley—Until Apr. 23 by C. A. Smith, city clk., for lateral sewers.

Ont., North Bay—Until Apr. 23 by H. J. McAuslan, town engr., for laying 3 sewers.

Ont., Ottawa—Until Apr. 24 by Secy Bd. Control for 8100 lin.ft. 48- and 54-in. rein.-con. or vitr. clay segment block sewer pipe.

Prices and Contracts Awarded

(★Indicates award of contract)

★**Mass., Reading**—City let contract sewerage system, Sect. 1, to Bruno & Pettiti, 18 Tremont St., Sect. 2 Susi & Williams, 3 North Sq., both of Boston; cost $200,000.

★**N. Y., Yonkers**—City let contract storm water and house sewers in McLean Ave. to N. Mangini, 17 Cliff Ave., $18,950.

★**Pa., Wilkes-Barre**—City let contract sewers and paving to D. Buckley & Son, 40 Oregon St., $12,000.

★**Pa., Williamsport**—City let contract sewers on various streets to R. J. Delong, 516 Anthony St., B. H. Coryell, 150 West 4th St., Busch & Stewart Trust Bldg.; cost $10,000.

★**O., Newark**—City let contract sewers on various streets to Keeley & Bolin, 116 Jackson St., Newark, and Henderson Bros., Coshocton.

★**Mich., Muskegon Heights**—City let contract laying 22,847 ft. 8- to 24-in. sewers to E. W. Kenegon, Muskegon, $70,480.

★**Ill., Gibson City**—City let contract to A. Birt, Decatur, at $25,860 for sewer.

★**Ia., Davenport**—City let contract sewerage system as follows: Richland Park and Westholme addition D. E. Keeler Co., 42 East 13th St., $16,764; Highland Park addition Independent Constr. Co., 304 Lane Bldg., $4,806.

★**Ia., Dunlap**—City let contract sewer system to M. A. Camery, Harlan.

Kan., Hays—See 'Streets and Roads."

★**Mont., Big Sandy**—Town let contract sewer and water system to Miracle Concrete Co., Ft. Benton, $80,000.

★**Mont., Terry**—City let contract storm sewers in Dist. No. 5, to Security Bridge Co., Billings, at $29,580.

★**Idaho, Nez Perce**—City let contract sewerage system to Security Bridge Co., Lewiston Natl. Bank, Lewiston, $28,499.

★**Cal., Fresno**—City let contract storm sewer system, Sect. 1, to Stanley & Manning, Fresno, $45,620; Sect. 2, J. Kennedy, Washington Bldg., Los Angeles, $43,156.

★**Cal., Los Angeles**—Bd. Pub. Wks. let contract pipe for outfall sewer Hyperion Station, to National Tank & Pipe Co., 11th St. & Santa Fe Ave., $11,929.

—Bd. Pub. Wks. let contract sewers in Fountain and Seward Ave. Sewer Dist., to J. Balch, 588 10th St., San Pedro, $47,900.

★**Ont., Simcoe**—Town let contract sewer extensions to Ontario Sewer Pipe Co., for tile, and Harper & Co., St. Thomas, for labor. About $16,000.

STRUCTURAL STEEL WORK

Proposed Work

N. J., Elizabeth—Bd. Freeholders rejected bids bridge over Elizabeth River on South Front St. New Bids. About $54,000. J. E. Roe, co. clk.

N. J. Jersey City—Hudson and Essex Cos. plan to repair Jackson and Clay St., bridges over Passaic River between 2 counties. T. J. Wasser, engr. Hudson Co.

—Central R.R. of New Jersey plans viaduct over Phillip St. About $100,000. A. E. Owen, New York, ch. engr.

Pa., Pittsburgh—County plans election to vote on $3,500,000 bond issue to rebuild 6 bridges across Allegheny River.

W. Va., Follansbee—Mingo Bridge & Ferry Co., incorporated with $25,000 capital stock, plans bridge over Ohio River. J. W. Walsh, C. B. Magee, E. E. Carter and others, interested.

Ga., Dalton—Comrs. of Whitfield and Murray Cos. plan steel and concrete bridge over Connasauga River. Cost to be divided equally between 2 counties.

Fla., Jacksonville—Co. Comrs. plan election to vote on bond issue to build steel bridge over St. John's River, $1,000,000 and steel and concrete bridges over Trout and McGill's Creek, $200,000. Harrington, Howard & Ash, Orear Leslie Bldg., Kansas City, Mo., preparing plans.

Miss., Port Gibson—County plans election to vote on $40,000 bonds for bridge and road improvements.

O., Mechanicsburg—City plans to install 50,000-gal. steel tank; also c.i. piping. Cost, $40,000. Richards Eng. Co., 39½ East Long St., Columbus, engrs.

Wis., Milwaukee—See "Reinforced Concrete."

Ia., Mason City—County plans to rebuild 920-ft. steel bridge over Lime Creek. R. E. Robertson, co. engr.

Minn., Bemidji—County to sell $39,000 bonds Apr. 24 to build bridges.

Minn., Duluth—Plans submitted to City Comrs. by W. H. Strachan, supt. Northern Pacific R.R., for viaduct 1200 ft. long., to connect Commerce and Railroad Sts. Cost $46,000. L. Ayers, city engr.

Tex., Center Point—County voted $15,000 bonds to build 2 bridges over Guadalupe River. Address Co. Clk. Kerrville.

Okla., Eufaula—Jefferson Highway Bridge Co. engaged Harrington, Howard & Ash, Orear-Leslie Bldg., Kansas City, Mo., to prepare plans for toll bridge across South Canadian River. Cost, $150,000. C. W. Gust, secy.

Ariz., Clifton—City sold $100,000 bonds to build 3 bridges and retaining walls along San Francisco River, also to improve streets.

Ariz., Globe—Bd. Supervs. plans bridge over Piru Creek. About $20,000.

Wash., Duval—County prepared plans for 180-ft. steel or frame bridge, with 1000-ft. approach. About $25,000. S. J. Humes, Seattle, co. engr.

Wash., Spokane—County Comrs. plan bridge over Spokane River joining Newman and Greenacres Twps., 15 mi. east of Spokane. A. R. Scott, co. engr.

Ore., La Grande—City and Oregon-Washington R.R. & Navigation Co. plans viaduct on N. 20th St. S. Murray, Portland, ch. engr. Cost, $2,000.

Cal., Duncans Mill—Northwestern P. R.R. plans steel bridge over Russian River. J. S. Williams, San Francisco, ch. engr. constr.

Cal., Oroville—See "Reinforced Concrete."

Cal., San Francisco—City plans bridge between here and Oakland to have 3 roadways and 3 railroad tracks; supports to consist of 14 spans, 2 large enough to allow passage of ships beneath them. M. M. O'Shaughnessy, city engr.

Cal., South Pasadena—Pacific Electric R. R. plans 200-ft. steel bridge over Arroyo Seco. G. E. Pillsbury, Los Angeles, ch. engr.

Ont., Toronto—Temiskaming Ry., 56 Church St., plans to build steel and concrete bridges. About $100,000.

Bids Desired

Mass., Boston—Until Apr. 25 by City rebuilding Brookline Ave. bridge over Boston & Maine R.R. tracks leading to Fenway Park. About $50,000. A. B. Corthell, Boston, ch. engr. Noted Apr. 12.

Mass., Plymouth—See "Reinforced Concrete."

N. Y., Massena—See "Reinforced Concrete."

N. Y., New York—Until May 7 by Pub. Ser. Comn., 120 Bway., furnishing and erecting structural steel for inspection sheds in 180th and 239th St. yards of Route No. 18, White Plains Road Rapid Transit R.R.

Pa., Johnstown—(Official)—Until Apr. 21 by Supt. Highways extension to 6th St. foot bridge, 11th Ward; advertised in this issue.

Pa., Wilkes Barre—See "Reinforced Concrete."

W. Va., Huntington—Until May 10 by County iron and steel superstructure for bridge over Four Pole Creek. Oliver & Maupin, Court House, engr.

S. C., Lockhart Mills—Until Apr. 27 by J. T. Jeter, superv., bridge over Broad River. Address co. clk., Union.

Ala., La Fayette—See "Reinforced Concrete."

Ia., Marion—Until Apr. 23 by co. aud., 3 pony truss bridges, 6 I-beam bridges and 3 box culverts. H. M. Hansen, co. engr.

N. D., Wahpeton—Until May 10 by county for 10 or more steel bridges. F. A. Burton, aud.

Prices and Contracts Awarded

(★Indicates award of contract)

★**Mass., Newton**—Boston & Albany R.R. let contract Beacon and Washington St. bridges to T. Stuart & Son Co., 222 Pearl St.

★**N. Y., White Plains**—(Official)—Bd. Supervs. let contract 2 steel girder and rein.-con. bridges over 2 branches of Amsville Creek to Ferro Concrete Co., Calder Bldg., Harrisburg, $18,562.

Pa., Phila—(Official)—Dept. Pub. Wks. received low bids steel and concrete superstructure, 5th St. bridge from Monaghan & Losse, 3016 Chestnut St., $21,500; steel and concrete bridge with approved fills at Linden Ave. and Ashburner St., J. McMenanny & Co., Harrison Blvd., $105,500 and $136,800 respectively.

★**Pa., West Chester**—(Official)—County let contract 4 arch masonry bridge over Brandywine Creek at Rock Run Village to Weeds & Brook Constr. Co., Norristown, $33,390.

★**Minn., Walker**—(Official)—Cass and Wadena Cos. let contract State Bridge No. 2384, to Iowa Bridge Co., 712 Hubbell Bldg., Des Moines, $15,895.

★**Ark., Eureka Springs**—County let contract bridge to International Bridge and Iron Co., Edgar and Cleveland Ave., Evansville, Ind., $20,000.

★**Okla., Tulsa**—County let contract wrecking and moving Bridge No. 33 known as Tulsa-West-Tulsa Wagon Bridge to Canton Bridge Co., Belder Ave. and Penna. R.R. NE Canton, $33,300.

★**Wash., Chehalis**—County let contract bridge over Skookumchuck River to C. C. Huber, Central Bldg., Seattle, $14,730.

★**Que., East Angus**—City let contract steel bridge over St. Francis River to Phœnix Bridge Co., 83 Colborne St., Montreal, $45,000.

Ont., Windsor—See "Reinforced Concrete."

REINFORCED CONCRETE

Proposed Work

R. I., Cranston—State Bd. Pub. Rd. soon receives bids rein.-con. bridge on Elmwood Ave. About $30,000. I. W. Patterson, Providence, ch. engr.

N. Y., College Point—(Flushing P. O.)—Queensboro Drug Co., 167 Jackson Ave., Long Island City, plans 6-story, 50 x 100-ft. rein.-con. factory, 5th Ave. and 20th St. About $50,000. O. H. Fincke, 19 12th St., preparing plans.

N. Y., Schoharie—(Official)—Town retained E. J. Doyle, engr., De Graaf Bldg., Albany, to prepare plans concrete arch bridge over Foxenkill Creek.

N. J., Newark—Port Newark Warehouse Co., 411 Kinney Bldg., plans 2-story, 60 x 200-ft. rein.-con. warehouse. About $75,000. Bartlett & Marsh, archts., 738 Broad St., preparing plans.

Reinforced Concrete (Continued)

Pa., Phila.—Pennsylvania R.R. and City to let contract this May rein.-con. bridge on 25th St. A. C. Sound, Broad St. Station, ch. engr. C. Albright, city engr.

Pa., Scranton—Dept. Pub. Wks. estimates cost South Scranton Bridge connecting Harrison and Crown Aves., at $90,000. W. Schunk, city engr.

Pa., Williamsport—Co. Comrs and City preparing plans 15 span rein.-con. bridge, 1500-ft. long, on Newberry-Duboistown Rd. M. C. Krouse, engr.

Ga., Dalton—See "Structural Steel."

Fla., Jacksonville—See "Structural Steel."

O., Osgood—Lippincott Co. plans 2-story, 60 x 160-ft. rein.-con. plant Stegner & Hughes, Commercial Tribune Bldg., Cincinnati, archt., preparing plans.

Ind., Mishawaka—County plans rein.-con. bridge on Mishawaka Ave. About $85,000. Address clk., South Bend. C. W. Cole, Mishawaka, archt.

Ill., Effingham—County soon lets contract for 100 ft. concrete bridge; cost $15,000. A. T. Austin, co. supt. highways.

Wis., Milwaukee—City plans to build North Ave. viaduct, rein.-con. and structural steel, trusses to span railroad tracks. Cost, $400,000. C. E. Malig, City Hall, archt.

Ia., Sioux City—Campbell Baking Co. plans rein.-con. factory. About $150,000.

Kan., Topeka—Golden Belt Grain & Elevator Co. soon lets contract 250,000 bu. rein.-con. grain elevator. About $75,000. E. J. Smiley, 304 New England Bldg., secy., Lehrack Contr. and Engr. Co., 725 Gloyd Bldg., Kansas City, Mo., engr.

Neb., Shelton—State and County plans rein.-con. bridge over Platte River. About $65,000. G. E. Johnson, Lincoln, state engr. E. H. Morey, Kearney, co. engr.

Ore., Salem—State Highway Comm., Bridge Dept., preparing plans rein.-con. arch bridge over Des Chutes River at Millers' Bridge; 2 concrete bridges and 1 wooden Howe truss bridge in Hood River County; 2 bridges in Umatilla County. Plans prepared for 175-ft. rein.-con. viaduct over Mosier Creek, Wasco County.

Cal., Emeryville—Air Reduction Co. making plans rein.-con. factory. About $80,000.

Cal., Los Angeles—Methodist Bd. Spanish Missions plans 6-story, 100 x 100-ft. rein.-con. institutional church north of Plaza. About $160,000 Train & Williams, archts., 226 Exchange Bldg., preparing plans.

Cal., Nevada City—County plans concrete addition to hospital. About $60,000.

Cal., Oroville—Great Western Power Co., 14 Sansome St., San Francisco, plans concrete and steel highway bridge over Feather River.

Cal., Sacramento—State Highway Comm. soon receives bids rein.-con. bridge over Cottonwood Creek, Shasta County. W. R. Ellis, secy.

Cal., San Diego—W. S. Post, engr., Fletcher Bldg., completed plans for 2 rein.-con. dams for San Dieguito Mutual Water Co., 1 dam 650 ft. long and 110 ft. high, on Santa Isabel River and other smaller structure on San Dieguito site, for use in irrigating about 20,000 acres.

—City retained M. M. O'Shaughnessy, 2732 Vallejo Ave., San Francisco, as supt. and cons. engr. for construction of Lower Otay Dam, rein.-con. About $682,200.

Ont., Toronto—See "Structural Steel."

Bids Desired

Mass., Plymouth—Until Apr. 24 by county for rein.-con. and steel bridge over North River between Marshfield and Norwell. About $30,000.

N. Y., Massena—(Official)—Until Apr. 20 by Frank A. Hough, town clk., for concrete-steel arch bridge over Grasse River, advertised in Apr. 12 issue.

Pa., Lancaster—(Official)—Until Apr. 23 by Co. Comrs., grouting and coating intrados of 9 arch rubble masonry bridge; advertised in this issue.

Pa., Wilkes-Barre—Until Apr. 23, by F. R. Reudershott, co. contr., for rebuilding No. 14 viaduct, rein.-con., and structural steel, paving, etc. Cost, $40,000. D. A. Keefe, Athens, engr.

W. Va., Bethany—Until May 5 by county for concrete bridge over Buffalo Creek. K. C. Brashear, Wellsburg, clk.

W. Va., Kingwood—Until May 3 by county concrete girder bridge, 2 18-ft. spans, 18-ft. roadway. H. E. Wilhelm, dist. engr. and clk.

W. Va., Logan—Until May 7 by county, 6 rein.-con. bridges, Logan Dist. R. M. Wilson, engr.

Ala., La Fayette—Until Apr. 26 by W. S. Keller, state highway engr., court house, 160-ft. steel bridge, wooden floors, concrete piers and abutments over Ossanippa Creek; also 30-ft. rein-con. bridge over Davis Creek.

Mich., Flint—Until Apr. 27 by council for 2 span rein.-con. arch bridge over Flint River on Wilson St. About $59,000. D. E. Newcombe, city clk.

Mo., Kansas City—(Official)—Until Apr. 24 by V. H. Cochrane, engr. bridges, for constructing Beardsley St. Trafficway, south of Main St., comprising several hundred feet, rein.-con. retaining wall and sidehill viaduct with necessary grading. About $110,000.

Colo., La Junta—Until Apr. 21 by O. Walker, co. clk., concrete bridge over Otero Canal on Santa Fe Trail between Manzanola and Fowler.

Cal., Merced—Until May 7 by J. Thornton, co. clk., concrete bridge over Los Banos Creek.

Cal., Visalia—Until May 8 by G. R. Prestidge, co. clk., for 9 concrete bridges on state highway between Visalia and Kern Co. line.

Prices and Contracts Awarded

(★Indicates award of contract)

★**N. Y., White Plains**—City let contract reinforced concrete bridge to Fagman Bros., Tuckahoe, $16,355.

N. Y., White Plains—See "Structural Steel."

★**Pa., Mont Clare**—County let contract rein.-con. bridge to Need Brooks Constr. Co., Perkiomenville, $15,000.

★**W. Va., Fairmount**—City let contract 2 concrete bridges to Concrete Steel Eng. Co., 42 B'way, New York, $550,000.

★**Neb., Grand Island**—City let contract, rein.-con. well and pump to W. Kelley & Co., about $18,000.

★**Mo., Jefferson City**—County let contract 3 concrete bridges to Pope & Kersting, Jefferson City, $10,680.

★**Ark., Pine Bluff**—(Official)—High School—Bd. Educ. let contract, rein.-con., to E. C. Loyse, Pine Bluff, $144,031.

★**Wash., Chehalis**—(Official)—County let contract 90-ft. rein.-con. span over Skookunchuck River to C. G. Huber, Central Bldg., Seattle, $14,730.

★**Wash., Selah**—Selah Fruit and Cold Storage Co. let contract 3-story, rein.-con. cold-storage plant to Scenic Constr. Co., Downs Bl., Seattle, $50,000.

★**Ore., Portland**—Frei Pickle Works let contract 3-story, 100 x 140-ft., rein.-con. factory to Hurley Mason Co., Worcester Bldg., $60,000. Noted Apr. 5.

★**Cal., Emeryville**—Air Reduction Co. let contract 1- and 2 story, rein.-con. factory to P. J. Walker Co., Monadnock Bldg., San Francisco, $80,000. Noted Apr. 17.

★**Cal., Los Angeles**—Cuyamaca Water Co., San Diego, let contract rein.-con. multiple arch dam 800 ft. long and 119 ft. high to Sharpe Fellowes Constr. Co., 523 Central Bldg., about $110,000.

★**Ont., Windsor**—City Council and Canadian Pacific R.R. let contract rein-con. and steel bridge to John V. Gray Constr. Co., Ltd., Confederation Life Bldg., Toronto, $16,000.

STREETS AND ROADS

Proposed Work

Mass., Leominster—City plans to pave 3000 sq.yd. with block on cement base and 17,000 sq.yd. heavy bituminous macadam; cost about $26,000.

Conn., Hartford—City soon lets contract paving 43,085 sq.yd. asphalt and 3010 sq.yd. granite block. R. N. Clark, city engr.

City plans to issue $1,000,000 bonds to improve streets. R. N. Clark, city engr.

N. J., Avon By The Sea—Boro. rejected bids paving Main St.; lowest bid $80,400.

N. J., Bayonne—City soon receives bids paving 20 streets. W. L. Clarkson, city engr.

N. J., Camden—Bd. Freeholders plans to pave portion White Horse Pike and improve portion Blackwood Pike and Browning Rd. About $58,000.

N. J., Elizabeth—City plans to repave Elm and Chilton St. and Sheridan Ave. About $31,500. T. E. Collins, city engr.

—Bd. Freeholders planning paving 3 mi. Mountain Ave., tar surfacing on concrete base; cost about $90,000. J. L. Bauer, 120 Broad St., co. engr.

N. J., Jersey City—Co. Blvd. Comn. granted appropriation of $60,000 by Legislature for paving boulevard.

N. J., Newark—Bd. Freeholders plans $50,000 bond issue for road work and other improvements in county park.

N. J., New Brunswick—Bd. Freeholders plans to issue $461,000 bonds to improve 9 roads in county.

N. J., Newton—Bd. Freeholders rejected bids paving Ross' Corner-Sussex Rd., concrete. About $109,588.

N. J., Perth Amboy—City sold $165,000 bonds to improve streets, $124,000 for park improvements, $40,000 to install sewers and $26,000 to build schools. S. J. Mason, city engr.

N. J., Sparta—Town voted bonds to build and improve road between Sparta and Woodport.

N. J., Trenton—City Comn., and Trenton and Mercer Co. Traction Corp. plans boulevard on South Broad St., from Liberty St. to Cedar Lane. About $12,000. A Swan, city engr.

Pa., Beaver—Co. Comrs. plan 4½-mi. concrete road. About $90,000.

Pa., Birdsboro—Town having surveys made to improve various streets. About $30,000.

Pa., East Mauch Chunk—(Official)—Boro. to let contract in about 3 months paving 1852 ft. Center St., amelsite tarvia, bituminous macadam or asphalt. Estimate $12,000 to $15,000. M. C. Bainberger, secy. Bascom & Seiger, Allentown, engrs.

Pa., Gettysburg—County made surveys rebuilding 5-mi. Harrisburg Rd.; warrenite, concrete or some other permanent material will be used.

Pa., Newport—Boro. plans paving, grading and curbing and installing sewers in 4th and Market St. About $20,000. P. Hertz, Walnut and Berry St., secy. A. Kupp, engr., Bellefonte, preparing plans.

Pa., Phila.—Bureau of Highways soon lets contract for repaving work to cost $1,500,000 and new paving work $300,000, county roads $250,000, extension of northeast boulevard $200,000, completion of Plaza Southern Blvd., $125,000.

W. Va., Fayetteville—(Official)—County rejected bids improving James River and Kanawha Turnpike in Sewall Mountain Dist. T. F. Maloy, dist. road engr. R. J. Stegall, co. clk.

N. C., Asheville—Co. Comrs. plan $1,000,000 bond issue to build roads including 80 mi. of concrete or bituminous macadam.

N. C., Jefferson—Co. election May 8 to vote on $200,000 bonds to build roads.

N. C., Southport—Co. election May 29 to vote on $12,000 bonds to build roads.

N. C., Warrentown—(Official)—City sold $15,000 bonds to improve streets. E. G. Elliott, city engr.

S. C., Beaufort—(Official)—City to sell $15,000 bonds Apr. 25 to improve Bay St., 13,000-sq.yd. cement concrete. Will let contract about May 10. H. G. Otis, city engr.

S. C., Darlington—City soon lets contract paving public square and streets. Bonds for $50,000 to be voted for work. L. Lee, Sumter, engr.

S. C., Gaffney—County sold $225,000 bonds to build highways.

S. C., Newberry—County voted $40,000 bonds to build roads in Twp. No. 4.

Ga., Brunswick—County election Nov. 7 to vote on $300,000 bonds to build highways and schools.

Ga., Griffin—City plans to spend $135,000 to pave streets.

Ga., Savannah—City planning paving portions of Lathrop Ave. and Waters Rd., concrete. E. R. Conant, city engr.

Ga., Thomasville—See "Water-Works."

Fla., Clearwater—County voted $100,000 bonds to build brick roads to connect Pass-a-Grille with new bridge to be built across Boca Ceiga Bay in Special Rd. Dist.

Ala., Troy—City soon lets contract paving business section. Estimate $75,000 to $100,000.

Miss., Charleston—(Official)—County soon lets contract 21-mi. highway to be 16-ft. gravel road oiled, connecting Coahoma and Le Flore Cos. Bonds for $200,000 sold for work. A. N. Bullitt, 92 North Tucker St., Memphis, engr.

Miss., Port Gibson—See "Structural Steel."

Miss., Waveland—City plans to issue $25,000 bonds to pave streets.

La., Lake Providence—County election Apr. 24 to vote on $100,000 bonds to build roads.

La., Monroe—See "Water-Works."

Tenn., Athens—County election May 2 to vote on $300,000 bonds to build roads.

Tenn., Blountville—County plans to issue $100,000 bonds to build roads.

Tenn., Dandridge—Co. Court authorized $200,000 bond issue; $50,000 repairing old roads and $150,000 to build new roads. A. Holsinger, comr.

Tenn., Dayton—County election in May to vote on $100,000 bonds to build roads. C. D. Sanborn, chn. com.

Tenn., Greenville—Greene County voted $510,000 bonds to improve roads.

Tenn., Irwin—Co. Comrs. voted $100,000 bonds for building roads. Noted Apr. 5.

Tenn., Jacksboro—Co. Comrs. plan election to vote on $350,000 bonds to build roads.

Tenn., Seiverville—County votes June 2 on $250,000 bonds for roads.

Tenn., Wartsburg—County Court will issue $200,000 bonds for road work. J. A. Barger, road supt.

Ky., Fulton—Fulton Commercial Club plans 6-mile rock road west of city. About $70,000.

Ky., Scottsville—County plans to grade and surface several roads with gravel. J. W. Crowe, co. engr.

Streets and Roads (Continued)

O., Cleveland—County soon receives bids paving portion Broadway. About $120,000. W. A. Stinchcomb, co. surv.

—City rejected bids paving and improving portion 66th St. R. Hoffman, city engr.

—City plans improving portion Woodhill and Pearl Rd. R. Hoffman, city engr.

O., Lisbon—County to let contract in May improving East Liverpool-Lisbon Rd. including bridges, draining and culverts. About $150,000. M. C. Armstrong, engr.

Ind., Bloomfield—County received no bids building 2 macadam roads. Wright Twp. G. E. Kidd, aud.

Ind., Elkhart—City plans to improve streets. About $150,000. L. M. Russell, city engr.

Ind., Kendallville—City plans paving portion South Main St. Cost, $36,282; also improving water supply system; cost, $16,000.

Ind., Logansport—City plans paving Seybold and Helm St. H. H. Tompson, city engr.

Ind., Terre Haute—City plans paving about 5500 ft. on South 3rd St.; also alley between 6th and 6½ St., either brick, asphalt or concrete. Frank A. Rattman, city engr.

Ind., Washington—County received no bids building pike road, Washington Twp. J. D. Clark, co. aud.

Mich., Atlanta—County plans trunk line road through 3 townships. J. H. McQueen, co. surv.

Mich., Detroit—County plans to spend $1,500,000 to improve roads. E. C. Dingeman, surv.

Mich., Hastings—County plans to build 10- to 20-mi. county and trunk line roads. G. Burgess, co. engr.

Mich., Kalamazoo—County plans to build 5- or 6-mi. road. H. C. Fleming, co. engr.

Ill., Dixon—City plans about 9000 yd. paving. Chas. F. Nesbit, engr.

Ill., Herrin—City plans 8 to 10 mi. of 4-in. concrete sidewalk and 1½ mi. concrete paving. R. L. Adams, city engr.

Ill., Highwood—(P. O. Waukegan)—City plans paving Railway Ave., Funston, Palmer and other streets with portland cement concrete, about 20,000 sq.yd. Jas. Anderson, Jr., city engr.

Ill., Normal—City plans 8000 sq.yd. paving.

Ill., Peoria—Bd. Local Improv. plans paving portion North St., brick. About $34,590. L. D. Jefferies, city engr.

—Official)—County defeated $1,700,000 bonds to improve roads. O. Heinrick, clk.

Ill., West Frankfort—City plans to build 10 mi. concrete sidewalks and 7 mi. of hard roads. Putman & Mantz, Benton, engrs.

Ia., Davenport—City plans to extend Kirkwood Blvd. from Bridge Ave. to Christie St. R. E. Sawistowsky, city engr.

Ia., Dubuque—City plans to improve portion Bluff and South Bluff St. E. C. Blake, city engr.

Minn., Duluth—Bd. Comrs. voted $86,125 bonds for roads in 6th Dist. and $38,171 for roads in 4th Dist.

Minn., International Falls—City plans paving of 5 streets.

Minn., Olivia—County plans to build 12-mi. road. J. L. Johnson, co. aud.

Minn., Princeton—County plans to build 100-mi. highways. J. D. Gray, Milaca, county engr.

Kan., Pittsburgh—City election May 9 to vote on $30,000 bonds for street improvements.

Neb., Kearny—City voted $50,000 bonds to pave streets. E. H. Morey, city engr.

N. D., Grand Forks—County plans to gravel 20-mi. road. J. A. Ingram, co. engr.

N. D., Lisbon—County plans to build 30-mi. road. C. Eskestrand, supt. highways.

Mont., Butte—City plans grading, curbing and concrete sidewalks in Imprv. Dist. No. 230. About $18,000. J. J. Armstrong, city engr.

Mont., Roundup—City preparing plans paving business dist. About $60,000.

Mo., Benton—County election May 17 to vote on $950,000 bonds grading and paving 190-mi. road, flint gravel or clay binder. Noted Apr. 5.

Mo., Kansas City—City retained McCrae Engr. Co., Glendale Bldg., to prepare plans grading 60,000 yd. About $25,000. C. Hill, city engr.

Ark., McGehee—Comrs. of Desha, Lincoln, Drew, Chicot and Ashley Cos. retained Ford & MacCrea, engrs., Gazette Bldg., Little Rock, to make plans for Arkansas-Louisiana highway, from Grady to Louisiana state line and branch running from McGehee to Arkansas City. J. A. Dermott, pres.

Ark., Mt. Ida—County plans to build 50-mi. highways under supervision State Highway Comn., Little Rock.

Tex., Giddings—County voted $150,000 bonds for good roads.

Tex., Houston—County considering issuing about $1,000,000 bonds for road work.

Tex., McAllen—City plans election to vote on $16,000 bonds to pave streets.

Tex., McKinney—County defeated $100,000 bonds to build roads in Allen Dist.

Tex., Waco—City soon receives bids paving South 5th St. G. B. Gurley, city engr.

Okla., Anadarko—County voted $20,000 bonds to improve roads.

Okla., Bartlesville—County plans election to vote on $600,000 bonds to build 121-mi. hard surfaced highways, 16-ft. wide.

Okla., Claremore—County plans election to vote on $12,000 bonds to build roads in Oowalda Twp.

Okla., Pryor—County voted $20,000 bonds to improve roads in Choteau Twp.

Idaho, Twin Falls—City plans to build sidewalks in L. I. D. No. 28. About $38,500. J. A. Bybee, city engr.

Nev., Reno—City plans to spend $40,000 paving streets. H. C. Chism, city engr.

Ariz., Clifton—See "Structural Steel."

Ariz., Holbrook—County election Apr. 24 to vote on $160,000 bonds to build roads. R. S. Teeple, clk. bd. supervs.

Wash., Bellingham—Whatcom County Baker and Acme Twps., voted $33,000 and $55,000 bonds respectively, to build hard surface road from Deming to county line at Wickersham. J. J. Miller, audr.

—City plans to improve portion Grand Ave., asphalt on concrete base, concrete or other suitable materials. About $12,000. W. H. North, city engr.

Wash., Blewett—State Highway Comrs. planning building 12 mi. dirt road, cost $80,000. J. Allen, Olympia, engr.

Wash., Centralia—City plans to improve Washington Ave., Locust, Walnut, Pear, Plum, Cherry, Chestnut, Silver, Iron, Rock, Oak, Ash, King, and other streets by laying 5-ft. concrete sidewalks; also paving alley in Block 14, L. M. Lee, clk. Washington Addition.

Wash., Kelso—County made plans improving 3-mi. Pacific Highway north and south of Castle Rock; also plans 2 overhead crossings over Northern Pacific tracks. F. C. Cramer, Kalama, co. engr.

Wash., Port Angeles—City plans paving 2nd and 3rd Sts., concrete. Cost, $23,100. Frank Semon, city engr.

Wash., Seattle—City soon receives bids paving Utah and Forest Ave. About $35,000. A. H. Dimock, city engr.

Wash., Sedro Wooley—Council passed resolution for clearing, grubbing, grading and paving with concrete portions of Bennett, 6th and Nelson Sts. Cost, $20,000. C. S. Smith, city clk.

Ore., Portland—City soon receives bids 10,000 bbl. crude oil for oiling macadam and gravel streets during summer. P. H. Dater, city engr.

Ore., Roseburg—County election June 4 to vote on $555,000 bonds to build permanent highways. E. H. Lennox, clk.

Ore., Salem—State Highway Comn. authorized survey for highway across Wheeler Co. from east to west being continuation of Oregon Central Highway from Florence on Pacific Coast through state. Bonds for $800,000 recently voted for project.

Ore., The Dalles—County sold $260,000 bonds for highway work.

Cal., Bakersfield—City preparing plans paving portion 17th and 18th St. G. Ray, city engr.

Cal., Beaumont—Bd. Supervs. to let contract in May paving 10,547 lin.ft. Beaumont Ave., 5340 lin.ft. Brookside Ave. and 5194 lin.ft. Woodland Ave. in Beaumont Rd. Dist. About $46,827. C. R. Twinning, engr. for dist.

Cal., San Diego—City to let contract in May paving La Jolla Blvd., Prospect Pl. and other streets, including 413419 sq.ft. 4-in. concrete and 2057 lin.ft. cement curbs, etc. G. Cromwell, city engr.

—G. Cromwell, city engr., preparing plans for 23-mi. concrete paving on Torrey Pines Blvd. Contract to be let in fall.

Cal., Santa Rosa—City plans to pave 4th St., Topeka asphalt or concrete, including cement curb and storm drain. R. R. Smith, city engr.

N. S., Halifax—Wks. Dept. plans to construct sidewalks and curbs on various streets; cost, $25,000.

Bids Desired

Conn., Hartford—(Official)—Until Apr. 24 by Bd. Contract and Supply for 43,000-sq.yd. sheet asphalt on concrete base, 3000-sq.yd. granite block on concrete base and 6400-sq.yd. asphalt wearing surface only. R. N. Clark, city engr.

N. Y., Albany—(Official)—Until May 1 by State Highway Comn., 55 Lancaster St., repairing highways in Broome, Cayuga, Clinton, Columbia, Erie, Jefferson, Niagara, Orange, Oswego, Otsego, Saratoga, Suffolk and Westchester Cos.; advertised in this issue.

N. Y., Brooklyn—Until Apr. 26 by Clerk Bd. Municipal Bldg., furnishing, delivering and spreading 11,400 gal. refined tar on portion Ft. Hamilton Parkway. C. Ward, pres.

N. Y., New York—See "Sewers."

N. Y., New York—Until Apr. 20 by M. M. Marks, boro. pres., for regulating and repaving with sheet asphalt on concrete foundation portions of Wall, Scammel and Macdougal Sts.

N. J., Bayonne—(Official)—Until May 24 by Bd. Comrs. improving portions Garretson and Trask Ave., 6th, 29th, 1st, 52nd, 28th, Cooper and Agnes St. W. L. Clarkson, city engr.

N. J., Jersey City—(Official)—Until Apr. 24 by Br. Comrs. repaving portion Henderson St. C. A. Van Keuren, city engr.

Pa., Oil City—(Official)—Until May 14 by City paving several alleys, reln.-con. or vitrified brick, about 3350 sq.yd.; advertised in this issue.

Pa., Wilkes-Barre—(Official)—Until Apr. 24 at City Clerk's Office, furnishing and delivering f.o.b. cars, Wilkes-Barre, 30,000 gal. road oil, more or less; advertised in this issue.

Md., Baltimore—(Official)—Until May 1 by State Roads Comn., 601 Garrett Bldg., building 5 sections state highway and 1 bridge; advertised in this issue.

Md., Denton—Until Apr. 24 by county building section state-aid highway; 1½-mi., 12-ft. wide, macadam road from Federalsburg toward Preston, slag base and stone top; also 1-mi. 14-ft. concrete road from Ridgely and 1½-mi. shell road from Greensboro toward low schoolhouse. H. Waldorf, engr.

Va., Bedford—Until Apr. 23 by Co. Supervs. for 6-mi. macadam road between Campbell and Bedford Co. line and May's Mill.

W. Va., Beckley—(Official)—Until May 4 by County Court and Advisory Com., building 70 mi. improved roads; advertised in this issue.

W. Va., Clarksburg—Until Apr. 27 by county grading and paving, brick, concrete or asphalt, on 3.3-in. Shinn Run Rd., Clay Dist.; 1-mi. Mudlick Rd., Clay Dist.; 1-mi. Fairmont and Clarksburg pike, Coal Dist; ¾-mi. Clarksburg and West Pike, Clark Dist.; ½-mi. Northwestern pike, Tenmile Dist. G. M. Harbert, engr.

W. Va., Fairmont—(Official)—Until Apr. 27 by County Court building 31-mi. improved roads and streets, Lincoln Dist. A. G. Martin, clk.

W. Va., Fayetteville—Until May 7 by R. J. Stegall, co. clk., for improving portions of James River and Kanawha Turnpike, Falls Dist., about 14.5 mi.; bituminous macadam (penetration), Portland cement concrete, asphaltic concrete and other materials. T. F. Maloy, Landisburg, dist. road engr.

W. Va., Lewisburg—(Official)—Until May 1 by County Court, improving 17.5-mi. roads in Ft. Spring Dist.; advertised in this issue.

W. Va., New Cumberland—(Official)—Until Apr. 23 by County Court paving in Grant Dist., brick. About $125,000 available for work. C. E. Grafton, co. rd. engr.

N. C., Newbern—County receiving bids Apr. 23, 50-mi. brick road. S. H. Fowler, co. clk.

N. C., Roxboro—Until May 8 by Co. Highway Comrs. for sand clay road. M. R. Long, comr.

S. C., Pickers—Until May 8 by Co. Highway Comrs. for sand clay topsoil road.

Ga., Barnesville—(Official)—Until May 3 by Mayor and Council, grading, curbing, draining and improving certain streets, vitrified brick, asphalt or concrete, also grading and laying tile or concrete on certain sidewalks; advertised in this issue.

Tenn., Greeneville—Until Apr. 30 by County Comrs. grading 160-mi. and macadamizing 140-mi. road. Bonds for $510,000 voted for work. C. E. Colle, engr.

Tenn., Knoxville—Until Apr. 30 by City resurfacing 26,900 sq.yd. asphalt, on Asylum and Commerce Ave., Wall, Walnut, Market and Depot St. J. B. McCalla, city engr.

Tenn., Mountain City—Until May 7 by County for 25-mi. road. About $200,000 available for work.

O., Beallsville—Until Apr. 27 by C. Davis, village clk., paving streets with vitrified brick, grading, curbing and installing sewers.

O., Cleveland—Until Apr. 25 by city paving portion Coit, Euclid, Hilgert, Ingersoll, Lakeside and East 54th Sts. R. Hoffman, city engr.

O., Lancaster—(Official)—Until May 2 by city improving portion Wheeling St., including 1600-cu.yd. excavation, 4910 lin.ft. straight sandstone curb, 610 lin.ft. steel faced concrete, 560 lin.ft. backing, 1 manhole, 1 catch basin and 50 lin.ft. 15-in. pipe drain. About $13,900. J. Griggs, city engr.

Ind., Bloomfield—Until May 8 by G. E. Kidd, co. audr., 2 macadamized roads, Wright Twp.

Ind., Brownstown—Until May 7 by A. Leudtke, co. audr., tarvia macadam road, Carr Twp., gravel road Salt Creek Twp.

Ind., Vernon—Until May 7 by G. I. Bernhart, co. audr., crushed stone road, Lovett and Columbia Twp.

Streets and Roads (Continued)

Ind., **Versailles**—Until May 7 by J. F. Lochard, co. audr., crushed stone road, Brown Twp.

Ind., **Vincennes**—(Official)—Until May 8 by County, 43,000-sq.yd. brick paving, 6-mi. rolled-stone roads and 5½-mi. gravel roads; advertised in this issue.

Ind., **Winchester**—Until Apr. 26 by C. E. Tilson, co. audr., 2 stone roads, White River Twp.

Mich., **Ontonagon**—(Official)—Until Apr. 20 by Co. Road Comn. for macadamizing and grading roads; advertised in Apr. 12 issue.

Wis., **Clintonville**—Until Apr. 27 by city paving Shawano St., rein.-con. vitrified brick and asphaltic concrete.

Mont., **Bozeman**—Until Apr. 19 by C. A. Speith, city clk., for 4200 sq.yd. standard bitulithic pavement, also storm sewer. C. C. Widener, city engr.

Nev., **Ely**—Until Apr. 26 by F. D. Oldfield, co. clk., for highway work in Robinson Canyon on Lincoln highway.

Wash., **Everett**—Until Apr. 23 by M. Weatherbee, co. aud., for building 10 mi. permanent highway.

Wash., **Montesano**—Until Apr. 30 by county building permanent highway No. 15, also for clearing, grading, building culverts and trestle roadway over Oregon-Washington R.R. and Navigation Co.'s line and gravel surfacing Cosmopolis-North River Rd. G. D. Robertson, co. engr.

Wash., **Wenatchie**—(Official)—Until May 8 by Co. Audr. paving 1¼ mi. concrete. About $16,000. F. M. Berry, co. engr.

Prices and Contracts Awarded

(★Indicates award of contract)

Mass., **Boston**—Transit Comn. received low bids paving 13,000-sq.yd. Summer St., granite block, from H. S. Clark, 11 Montague St., Dorchester, $65,789; Coleman Bros., Pearl St., Chelsea, $67,405; J. Doherty, 133 Calumet St., Roxbury, $68,837.

★Mass., **Ware**—Town and Highway Comrs. let contract road work to Columbus Constr. Co., 16 Foster St., Boston.

N. Y., **Albany**—(Official)—State Highway Dept., 55 Lancaster St., received low bids, Apr. 11 repairing public highways as follows:

Repair Contract No. 1013, Road No. 5010, Albany Co., Sewage Disposal and Water Plant Co., Schenectady, $15,613; Repair Contract No. 1042, Roads Nos. 5502, 1102, 1104, 5253-C, 5255 and 5352-A, Allegany and Steuben Cos., Kennedy Constr. Co., Albany, $18,011; Repair Contract No. 1073, Roads Nos. 730, 731, 5264, 873 and 5151, Cattaraugus and Chautauqua Cos., R. Hopkins, Troy, $7650; Repair Contract No. 1032, Roads Nos. 596 and 596-A, Chenango Co.; Paddelford & King, Sherburne, $20,236. J. Walker, Albany, $20,917. Edgecomb Bros., Inc., Binghamton, $20,-999; Repair Contract No. 1023, Road No. 217, Delaware Co., Edgecomb Bros., Inc., Binghamton, $8278; De Graff & Hogeboom, Inc., Kingston, $9433. R. Hopkins, Troy, $9667; Repair Contract No. 1065, Road No. 5367, Greene Co., Catskill Constr. Co., Catskill, $38,938, Belmar Contr. Co., Inc., Troy, $41,500; Repair Contract No. 1078, Roads Nos. 167, 294, 401, 574-A, 648, 766-767, 1283, 1290, 1337 and 1367, 716, 717, 829, Monroe, Livingston and Ontario Cos., J. J. Crouch, Rochester, $15,586. Dale Engr. Co., Utica, $16,974. Ribstein-Holter Co., Inc., Rochester, $16,997; Repair Contract No. 1069, Roads Nos. 337, 1160, 1216, 1217 and 5492, Madison Co., Griffin & Griffin, Norwich, $6332, Paddelford & King, Sherburne, $6337; Repair Contract No. 1067, Road No. 15, Monroe Co., Wm. Bailey & Co., Rochester, $9853, Whitmore-Rauber & Vicinius, Rochester, $10,824, Ribstein-Holter Co., Inc., Rochester, $10,878; Repair Contract No. 1070, Roads Nos. 107, 155, 397, 511, 5124 and 5125, Montgomery Co., H. A. Murphy, Albany, $10,448, J. P. Dugan & Co., Inc., Amsterdam, $10,833; Repair Contract No. 1053, Roads Nos. 547 and 5106, Nassau Co.; E. Monahan, Manhattan Beach, $11,821; Repair Contract No. 1033, Road No. 487, Onondaga Co., C. E. Haney, Camillus, $29,645, Flood & Van Wirt Co., Hudson Falls, $32,367. G. B. Dickinson, Syracuse, $33,617; Repair Contract No. 1085, Roads Nos. 74 and 971, Onondaga Co., H. W. Roberts Co., Utica, $40,-883. G. B. Dickinson, Syracuse, $42,344; Repair Contract No. 1075, Roads Nos. 146, 207 and 333, Ontario Co., Dale Eng. Co., Utica, $19,740, F. T. Murray, Rochester, $20,270; Repair Contract No. 1043, Road No. 387, Orleans Co., Wing & Munger, Holley, $28,429, Greece Constr. Co., Rochester, $31,983; Repair Contract No. 1059, Roads Nos. 162, 220, 316, 708 and 784, Otsego Co., D. W. Robbins, Inc., New York City, $19,-911, R. Hopkins, Troy, $20,526; Repair Contract No. 1014, Road No. 1115, Rensselaer Co., Belmar Contr. Co., Inc., Troy, $15,460, Sewage Disposal and Water Plant Co., Schenectady, $16,319; Repair Contract No. 1054, Roads Nos. 907 and 5351, Steuben Co., Dale Eng. Co., Utica, $25,941, F. T. Murray, Rochester, $28,277, T. H. Gill Co., Binghamton, $29,391; Repair Contract No. 1052, Road No. 5173, Ulster Co., S. Beskin, Beacon, $32,214, DeGraff & Hogeboom, Inc., Kingston, $36,595.

(Official)—State Highway Dept., 55 Lancaster St., received low bids Apr. 13 repairing public highways as follows:

Repair Contract No. 1086, Roads Nos. 1174, 111, 123, 737, 882, 509, 5171 and 5087, Cayuga, Cortland, Oswego and Seneca Cos., R. Hopkins, Troy, $11,601; Repair Contract No. 1049, Road No. 482, Livingston Co., F. T. Murray, Rochester, $15,260, F. H. Gill Co., Binghamton, $15,-904, Dale Engr. Co., Utica, $16,992; Repair Contract No. 1076, Roads Nos. 286, 760, 1281, 386, 391, 392, 581 and 1293, Monroe and Orleans Cos., Sweeney & Boland, Rochester, $12,587, Ribstein-Holter Co., Inc., Rochester, $13,110, Dale Eng. Co., Utica, $13,879; Repair Contract No. 1077, Roads Nos. 1187, 5522, 485, 484, 608, 636, 662, 1196 and 5511, Monroe and Ontario Cos., J. J. Crouch, Rochester, $9544, Dale Eng. Co., Utica, $10,573; Repair Contract No. 1010, Road No. 299, Montgomery Co., J. P. Dugan & Co., Inc., Amsterdam, $14,426; Repair Contract No. 1031, Road No. 219, Otsego Co.; J. Walker, Albany, $4260; Repair Contract No. 1030, Roads Nos. 936, 5240, 5247, 5455 and 5443, Otsego and Delaware Cos., Harris & Griffin, Norwich, $9439, Atlantic Refining Co., Phila., $9507, D. W. Robbins, Inc., New York City, $10,358; Repair Contract No. 1008, Road No. 478, Rensselaer Co., Flood & Van Wirt Co., Hudson, $26,431; Repair Contract No. 1034, Road No. 5282, Seneca Co., Kennedy Constr. Co., Albany, $7975; Repair Contract No. 1080, Road No. 5211, Steuben Co., F. T. Murray, Rochester, $10,430, Dale Eng. Co., Utica, $12,747, J. C. Bradley, Corning, $14,017; Repair Contract No. 1082, Roads Nos. 906 and 5254, Steuben Co., F. T. Murray, Rochester, $18,927, Kennedy Constr. Co., Albany, $18,961, Greenfield Constr. Co., Hornell, $19,433; Repair Contract No. 1035, Road No. 699, Sullivan Co., N. E. Young, Jeffersonville, $25,783; Repair Contract No. 1083, Roads Nos. 5289 and 29, Tioga and Chemung Cos., Holeran Bros., Elmira, $13,865, P. F. Connolly, Elmira, $14,969; Repair Contract No. 1041, Road No. 919, Wayne Co., F. T. Murray, Rochester, $22,218, Greece Constr. Co., Rochester, $23,671, Dale Eng. Co., Utica, $23,806; Repair Contract No. 1055, Road No. 5323, Yates Co., F. T. Murray, Rochester, $11,450, T. T. Murray, Leroy, $12,112.

N. Y., New York—(Official)—M. M. Marks, boro. pres., received low bids regulating and repaving (a) Broadway, from Vesey St. to Bleecker St., sheet asphalt on stone block foundation (b) Broadway from Vesey to Bleecker St., sheet asphalt on stone block foundation from curb to rail with granite block pavement in and between tracks, on concrete foundation, (c) Broadway from Bleecker to 14th St., sheet asphalt on stone block foundation, (d) portion 31st St., sheet asphalt, (e) portion 125th St., sheet asphalt, (f) 138th St., sheet asphalt, (g) portion 5th Ave., granite block, (h) portion Ave. D, wood block, from Sicilian Asphalt Paving Co., 41 Park Row, (a) $56,931, (c) $25,843; W. J. Fitzgerald, 547 West 45th St., (b) $100,533; Uvalde Asphalt Paving Co., 1 Broadway, (a) $59,217, (b) $105,197, (c) $24,599; Dabney Asphalt Co., (f) $36,308; Asphalt Constr. Co., Madison Ave. and 137th St., (f) $34,711, (g) $15,000; Franklin Constr. Co., 52 Vanderbilt Ave., (h) $12,366.

N. Y., Oswego—City received low bids repaving portion West First St. from Tyne & Willie, Binghamton, $35,097; G. B. Dickerson, Union Bldg., Syracuse, $39,068.

N. J., Bloomfield—(Official)—City received low bids 80,000-gal. road oil (a) nonasphaltic, (b) asphaltic 40 to 45% asphalt, (c) asphaltic over 60% asphalt from C. R. Reid & Co., (b) .0934, (c) .125; Headley Good Roads Co., 30th and Spruce St., Phila., (a) .1198, (b) .0848, (c) .0841; Standard Oil Co., 26 Broadway, New York, (a) .1042, (b) .0767, (c) .0867; W. S. Logan, 9 Clinton St., Jersey City, (a) .0888, (b) .0773, (c) .1078; E. Lansdell Co., (a) .0848, (b) .0773, (c) .081; Penn. & Del. Oil Co., (a) .0898, (b) .0892.

N. J., Elizabeth—Bd. Freeholders received low bid paving portion Mountain Ave. from C. H. Winans Co., Linden, $112,311.

N. J., Jersey City—City Comrs. received low bids for 17,000 ft. asphalt block pavement in West Side Park from Hasting Pavt. Co., 25 Broad St., New York City, $38,073 and A. Zoffoli & Son. Co. 261 Wayne St., Jersey City, $41,961.

★**N. J., Newark**—City let contract paving portion Edwin and Maple Pl., Chadwick and other streets, to Standard Bitulithic Co., Essex Bldg., $54,000.

★**N. J., Nutley**—(Official)—Town let contract paving during year to Spaltz Bros., Maple Pl., $12,387.

N. J., Orange—City Comn. received low bids paving Main St., wood block, (a) 3 year guarantee (b) 5 year guarantee, from R. R. San Giovanni, 78 Hoyt St., Newark, (a) $94,749, (b) $96,000; Van Keuren & Sons, $127,675, (b) $129,905; Newark Paving Co., 133 1st St., Newark, (a) $106,253 (b) $107,213; C. Ippolito, Orange, (a) $111,815 (b) $113,725.

★City let contract supplying 125,000 gal. road oil to Headley Good Roads Co., 30th and Spruce St., Phila., 8.23c. per gal.

★**N. J., Passaic**—City Comn. let contract paving Passaic Ave., sheet asphalt, to Union Building & Constr. Co., $51,577.

N. J., Salem—Bd. Freeholders received low bids building 6th sect. Pennsgrove-Malaga Rd. from Sutton & Corson, Ocean City, $98,501, Clark & Johnson, Somers Point, $100,375, J. L. LeCompte, 39 West State St., Trenton, $102,598.

★**Pa., Phila.**—City let contract repairing alleys to C. A. McHugh Co., Phila., $20,000.

—Dept. Pub. Wks. let contracts grading and repaving various streets with asphalt to Barber Asphalt Paving Co., Land Title Bldg.; Eastern Paving Co., Penn Sq., Mack Paving and Constr. Co., 20th and Sedgley Ave.; Philadelphia Paving Co., 1345 Arch St., Ryan & Reilly Co., 33rd and Gray's Ferry Rd.; D. J. Lynch, 4029 Cambridge St.; J. J. McHugh, 1420 South Penn Sq. and P. J. Snyder & Co., 176 East Tulpehocken St.

★**Pa., Roaring Springs**—State Highway Comm., Harrisburg let contract 13-mi. road, Blair and Bedford Cos. to J. S. Vipond, Altoona.

★**N. C., Yadkinville**—County let contract 70-mi. roads from Donnaha to sand road near Jonesville to Smith Constr. Co., Atlanta.

★**S. C., Anderson**—City let contract paving 150,000 sq.yd. asphalt and brick, to Southern Paving & Constr. Co., James Bldg., Chattanooga, Tenn., $300,000. Noted Apr. 5.

★**Tenn., Erwin**—City let contract 19,000-sq.yd. paving to Murray Constr. Co., Holston Natl. Bank Bldg., Knoxville, $45,000.

★**Ky., Louisville**—County let contract building 2-mi. Preston-Sts. Rd. to H. Bickel Co., Louisville, $31,869.

★**O., Bryan**—(Official)—County let contract improving Inter-County Highway No. 306, Jefferson Township, to Kelly Constr. Co., Bryan, $113,090.

★**O., Cincinnati**—(Official)—County let contract resurfacing various roads to Ruebel Constr. Co., Colerain and Virginia Ave., $12,072.

★**O., Cleveland**—County let contract paving Anderson Rd. to C. Dempsey, $22,056.

—Bd. Control let contract improving Woodstock Ave. to A. M. Jejsa Paving Co., $23,444; Rosehill Ave. to Cleveland Trinidad Paving Co., 3409 Trumbull St., $13,488.

★**O., Columbus**—(Official)—Clinton Cowen, state highway comr., let contract improving Sect. "A," Cincinnati-Hamilton Rd., I. C. H. No. 39, Springfield and Coleraine Twps., to Andrews Asphalt Paving Co., Columbus Savings & Trust Bldg., $160,400.

★**O., Mt. Gilead**—(Official)—County let contract Mt. Gilead-Iberia Rd. to Brewer, Tomolson & Brewer, Chillicothe, $73,194; Penlan Rd. to Forest Constr. Co., Forest City, $46,451.

★**Ind., Logansport**—(Official)—County let contract improving highways to Palmer Moore & Co., Logansport, $20,500.

★**Ind., Wabash**—County let contract 2.14-mi. stone road to Lynn Bros., Wabash, $13,906.

★**Mich., Centerville**—County let contract gravel road, Sturgis Twp., to Beers & Brown, Geneva, Ind., $12,967.

★**Mich., East Lansing**—City let contract grading, curbing, and draining Michigan and Grand Aves. to W. H. Ryan, Lansing, $21,104.

Ill., Chicago—County received low bids roads in Worth and Palos Twp., including 89,642-sq.yd. paving, 29,486-sq.yd. earth shoulders, 20,-600-cu.yd. excavation in earth and old macadam, etc., from J. A. McGarry & Co., 189 West Madison St., at $152,636.

★**Ill., St. Charles**—(Official)—City let contract paving 4500-sq.yd., brick, to A. E. Ball, Hampshire. Noted Apr. 5.

★**Ia., Avoca**—(Official)—Town let contract paving 20,945-sq.ft. monolithic brick block and 18,-706 lin.ft. of 3-ft. 6-in. curb and gutter to Moore-Seig Constr. Co., Waterloo, $1.89 and 80c. per sq.yd. respectively.

★**Ia., Burlington**—City let contract paving portion South Main St. to G. Peterson, 511 South 8th St. Noted Apr. 5.

★**Ia., Keokuk**—City let contract paving portion Main St. to Cameron Joyce & Co., 515 Midland Bldg., Kansas City, Kan., portion Franklin St. to Keokuk Quarry & Constr. Co., Keokuk.

★**Ia., Orange City**—(Official)—Town let contract paving portion Main St. to Bryant Asphalt Paving Co., 807-8 Black Hawk Bldg., Waterloo, $1.75 per yd.

★**Ia., Primghar**—County let contract grading to F. Richardson, Maxwell, $15,000.

★**Ia., Sioux City**—Co. Bd. Superv. let contract permanent roads in Woodbury Co. to W. H. Dugan, 820 North 42nd St., Omaha, at $19,000.

★**Kan., Hays**—City let contract paving, curbing and guttering, excavating storm sewer and lowering 4 blocks sanitary sewers to A. Young Constr. Co., Lawrence, $50,820.

★**Kan., Mankato**—City let contract paving streets to Geiger Constr. Co., Leavenworth, $27,-558.

★**Kan., Pittsburgh**—(Official)—City let contract to Thogmartin & Gardiner, Ft. Scott, paving 4214 sq.yd. brick, 2958 lin.ft. combined curb and gutter and 1891 cu.yd. grading, $5303; to Kaw Paving Co., Topeka, paving 10,527 sq.yd., 4769 lin.ft. combined curb and gutter, 5256 cu.yd. grading, $31,219, and repaving 7037 sq.yd. 2-in. asphaltic concrete, $10,922.

Streets and Roads (Continued)

★**Mo., Brunswick**—City let contract paving 8000-sq.yd. brick block to Kennedy & Olson, 601 Ridge Arcade Bldg., Kansas City, $1.95 per sq.yd.

Mo., St. Louis—(Official)—Bd. Pub. Ser. received low bids paving (a) Goodfellow Ave., (b) Oriole Ave., (c) Plover Ave., (d) Beacon St., (e) Kennerly Ave., (f) Minnesota Ave., (g) Gasconade St. from, F. P. McCormick, Tulsa, Okla., (a) $21,509, (b) $24,397, (c) $26,168 (d) $40,124, (f) $10,054, (g) $10,079; Trinidad Asphalt Mfg. Co., Guaranty Trust Bldg., (a) $22,584, (b) $24,179, (c) $25,988, (d) $40,968; Granite Bituminous Paving Co., St. Louis, (e) $23,258; Evermann Constr. Co., (f) $9544; (g) $9395; J. F. McMahon Constr. Co., St. Louis, (g) $10,-138.

★**Ark., Pine Bluff**—Co. Rd. Improv. Dist. No. 15 let contract building highway from bridge over Arkansas River to Arkansas Co. line via Altheimer, Wabbeska, and Humphrey, to J. A. Perdue & Co., Pine Bluff, $214,000.

★**Wash., Davenport**—(Official)—County let contract graveling 12½-mi. permanent highway No. 3 to Zane & Donnell, Hanford, $41,436.

★**Wash., Ellensburg**—W. G. Damerow, co. aud., let contract permanent highway No. 3B to Hutter Constr. Co., Cle Elum, $13,974; No. 2 C to O. S. Brown, Ellensburg, $19,530.

★**Wash., Seattle**—City let contract concrete pavement on Renton Junction-Duwamish highway to Washington Paving Co., L. C. Smith Bldg., $67,842.

—Comrs. let contract paving portion Lake Washington Blvd., with 1 course concrete, including bridges and culverts to R. E. Russell, Lumber Exchange Bldg., $22,000.

★**Wash., Tacoma**—County let contract building Hill Highway to Independent Asphalt Paving Co., Northern Bank Bldg., Seattle, $34,450.

★**Ore., Astoria**—County let contract grading, grubbing and clearing Nehalem-Astoria highway to E. A. Gerding, $11,977.

★**Ore., Portland**—County let contract paving 11-mi. St. Helenes Highway to Warren Constr. Co., Journal Bldg., $180,922.

★**Calif., Beaumont**—Bd. Supervs. let contract grading and graveling roads to Bonrader & Smythe, Coachella, $22,384.

★**Cal., Fillmore**—Bd. Supervs. let contract 7.54 mi. concrete pavement on Fillmore-to-Piru Rd., Div. 3, to Brashear-Burns Co., La Brea Rd. and Wilshire Blvd., Los Angeles, $31,602.

★**Cal., Long Beach**—City let contract paving 357,131-sq.ft. on Anaheim St. and Cedar Ave. to Fairchild-Gilmore-Wilton Co., Pacific Electric Bldg., Los Angeles, $50,976.

★**Calif., Los Angeles**—City let contract improving Bronson Ave. to Bryant & Austin, Inc., 1650 Compton Ave., $38,976.

★**Cal., Marysville**—City let contract improving streets in Dist. No. 4 and 5 to Federal Constr. Co., Sharon Bldg., San Francisco, $19,603 and $18,576 respectively

Calif., Merced—City received low bids paving 300,000-sq.ft. 4-in. and 82,000-sq.ft. 5-in. concrete with oil and sand surface, $37,500 lin.ft. concrete curbs, etc., from J. H. Shafer, 1640 Temple St., Los Angeles, $54,997; E. Shilling, 435 South Sichel St., Los Angeles, $61,000; Worswick Street Paving Co., Fresno, $63,000.

★**Cal., Palo Alto**—(Official)—City let contract paving 7-mi. road, concrete, to P. Coldwell, San Francisco, $142,000.

★**Calif., Sacramento**—State Highway Comn. let contract highways Nos. 3, 4, 6, 7, 8 and 9 including bridges and culverts to Clark & Henery Constr. Co., Ochsner Bldg., Sacramento, $118,113. Noted Apr. 5.

★**Cal., Yreka**—City let contract 3¾ mi. highway between Yreka and Scotts Valley to A. Anderson & Co., Grants Pass., Ore., $22,500.

RAILWAYS

STEAM AND ELECTRIC

Proposed Work

Mass., North Adams—Berkshire Street Ry., Pittsfield, will reconstruct its tracks on State and Union St. C. Q. Richmond, Pittsfield, gen. mgr.

N. Y., Utica—New York State Rys., (Utica lines), will improve lines in city. About $155,-845. B. E. Tilton, 325-239 Main St., gen mgr.

N. J., Newark—Hudson & Manhattan R.R., 30 Church St., New York, granted franchise by City Council to extend line from Military Park to terminal building of Public Service Ry., Broad and Bank St.

Pa., Darby—Southern Pennsylvania Traction Co., Chester, controlled by Wilmington & Philadelphia Traction Co., will reconstruct tracks from Darby to Eddystone, 5½-mi. W. A. Heidle, 603 Market St., Wilmington, Del., gen. supt.

Md., Baltimore—Western Maryland Ry making surveys for relocating portions of road from Baltimore to Cumberland, also additional tracks and double tracks between Highfield and Pen Mar, Highfield P. O. H. R. Pratt, Continental Trust Bldg., Baltimore, ch. engr.

Va., Graham—Chamber of Commerce, Bluefield, W. Va., is reported interested in plans for an electric railway from Graham to Welch, W. Va., 53 mi. via Pocahontas, Boissevain and North Fork, Va., and Bramwell, Keystone and Gary, W. Va. L. H. Duncan, secy.

Va., Norfolk—Norfolk & Portsmouth Belt Line R.R. plans to extend line from South Norfolk across eastern branch of Elizabeth River through Norfolk Co. to point near Elizabeth River and property of Virginia Terminal Co. G. S. Shafer, Port Norfolk, supt.

Ga., Atlanta—Georgia Railway & Power Co. plans to spend $700,000 during year for improvements, including new tracks and lines. G. W. Brine, Electric & Gas Bldg., Atlanta, gen. mgr. and vice-pres.

Ind., Jonesboro—Union Traction Co. of Indiana, Union Bldg., Anderson, will install block signal system between Jonesboro and Summitville. H. A. Nicholl, gen. mgr.

Ill., Effingham—Illinois Central R.R. plans line from Effingham to Golconda and Burlington Bridge, Metropolis. A. S. Baldwin, 135 East 11th Pl., Chicago, ch. engr.

Ill., Quincy—E. S. Woolner, 219 South Elizabeth St, Peoria, promoter of Chicago, Peoria & Quincy Traction Co., made proposition to citizens of Quincy to extend proposed interurban line from Peoria to Quincy through coal fields of Rushville; also that company be formed with $25,000 capital stock to pay preliminary expenses, same to be refunded after road is completed, in addition to bonus of like amount in stock in road.

Ill., Springfield—Springfield & Carbondale Ry. applied to Pub. Utilities Comn. of Illinois for permission to build line from Springfield to Carbondale. C. H. Forester, 76 West Monroe St., Chicago, pres.

Ia., Davenport—Tri-City Ry. of Iowa will extend car line on portion 17th St. Line may connect with Watch Tower line to form loop. J. G. Huntoon, 125 West 3rd. St., vice-pres. and gen. mgr.

Kan., Jefferson—Interstate Traction Co., Independence, recently organized, plans electric railway from point near Jefferson to Collinsville, Okla., via Tyro and Caney, Kan., and Copan, Dewey, and Bartlesville, Okla., about 8 mi.; later line will be extended to Nawata. A. W. Schulthies, Independence, pres.

Kan., Parsons—Missouri Kansas & Texas Ry. will replace 65-lb. rails with 85-lb. rails on line between Parsons, Kan., and Dewey, Okla., 58 mi. L. F. Lounbladh, Dallas, Tex., ch. engr.

Neb., Waverly—Chicago, Burlington & Quincy R.R. will double track line from Waverly to Ashland and take out big bend in road near Ashland; also cut directly across Salt Creek bottom taking out big curve and giving road more direct entrance into yards there. A. W. Newton, 547 West Jackson Blvd., Chicago, ch. engr.

N. D., Alta—Northern Pacific Ry. plans to lay 90-lb. steel rails between Alta and Berea (Valley City P. O.). H. E. Stevens, St. Paul, Minn., ch. engr.

N. D., Edinburg—Northern Dakota R.R. plans extending line from Edinburg to Concrete. About $300,000. J. F. Creiman, Concrete, secy., treas. and gen. mgr.

Mo., Mexico—(Official)—We have been advised that Chicago, Burlington & Quincy R.R. did not let contract extending line from Mexico to Kansas City to MacArthur Bros. Co., 208 South La Salle St., Chicago. Contemplated line will run from Mexico to Carrollton or Moberly, to get a Kansas City connection.

Ark., Ft. Smith—Ft. Smith Light and Traction Co., controlled by Standard Gas & Electric Co., is having surveys made extension to Jenny Lind and Greenwood. N. I. Garrison, mgr.

Okla., Skiatook—Claremore Commercial Club, Claremore, plans electric railway from Skiatook to Pryor, via Collinsville and Claremore, 40-mi.

Ariz., Clarkdale—Arizona Extension R.R. granted permission by State Corporation Comn. to issue $4,000,000 stock and $4,000,000 in bonds to build line from Clarkdale to Mesa, 160 mi. J. S. Douglas, Jerome, pres.

Ariz., Clarkdale—United Verde Copper Co. plans to extend its Verde Tunnel & Smelter R.R. from tunnel mouth to Jerome, 4 mi. T. C. Roberts, Clarkdale, ch. engr.

Cal., Fresno—Southern Pacific Co. having tentative plans prepared for switching yards and roundhouse. About $500,000. W. Hood, Flood Bldg., San Francisco, ch. engr.

Cal., Los Angeles—Pacific Electric Ry. received 40 year franchise from Bd. Supervs to construct and maintain electric railway along certain public roads and highways of Los Angeles County, consisting of standard-gage single and double-track spur over and across Covina Blvd. along Railroad Ave. and over and along Clark [illegible] and Los Angeles St., single track spur over and across Covina Blvd. and along Railroad Ave. from north right-of-way of Pacific Electric Ry., Covina line to Alderson Ave., double track spur over and across Clark St. to Southern Pacific R.R. right-of-way, single track spur over and across Los Angeles St. J. McMillan, Pacific Electric Bldg., gen. mgr.

Cal., San Bernardino—Atchison Topeka & Santa Fe Ry. is reported to be considering line into Yucaipa Valley. F. M. Bisbee, Amarillo, Tex., ch. engr., western lines.

Man., Transcona—Transcona Electric Ry. made application to Manitoba Legislature to be incorporated with $1,000,000 capital stock, to build line in Transcona, Springfield and East Kildonan to Winnipeg or St. Biniface to connect with lines now in operation or to be built by Winnipeg Electric Ry. E. P. Garland, E. Frith, C. W. Chappell, R. Siderfin and L. Palk, all of Winnipeg, provisional directors.

Bids Desired

N. D., Mandan—(Official)—Until May 2 by H. J. Tavis, secy. bd. dir. of Manning, Mandan & Freda Ry. for preliminary survey to find most feasible and practical route for a steam railway; advertised in Apr. 12 issue.

Prices and Contracts Awarded

(★Indicates award of contract)

★**Cal., Portersville**—Visalia Electric R.R. let contract 6-mi. roadbed about 4-mi. southeast of Portersville, 4½-mi. of which will be main line and 1½-mi. branch line to rock quarry, to O. Ford, Riverside.

EXCAVATION AND DREDGING

Proposed Work

N. Y., Sodus—Drainage—Wayne County plans draining 2000 acres land by straightening, enlarging and improving Salmon Creek, from Sodus Center to about 1-mi. above Joy and by improving and constructing other channels. Cost as follows: Rock excavation, $92,260; earth excavation, $33,000; bridge, $2000; laterals, $850. Address Clk., Wayne.

O., Portsmouth—Reclamation—P. G. Harper, city engr., prepared plans flood defense system to reclaim about 100 acres land.

Minn., Marshall—Ditches — (Official) — County prepared plans and estimates cost of ditches as follows: No. 30, tile, $36,349; No. 32, $32,665; No. 35, $8635; No. 38, $12,390; Judicial Ditch No. 31, open ditch and tile, $47,153. O. H. Stirk, Marshall, drainage engr.

Neb., Fremont—Ditch—Dodge County plans 3-mi. ditch, Blomendahl D. D. About $11,367. W. E. Barz., clk.

Ark., Arkadelphia—(Official)—Drainage—Ross D. D., Clark Co., making surveys in district comprising 30,000 acres, including about 30-mi. ditch. Estimate $125,000. W. E. Miller, Smithton, dir.

Tex., Beaumont—Canal—Nolte Irrigation Co. will construct canal system and install irrigation pumping plant. E. S. Nolte, Mone, stockholder.

Cal., Paradise—Dam, etc.—Paradise Irrigation Dist. soon lets contract dam and 30-mi. pipe lines. About $280,000. S. E. Kieffer, Mechanics' Institute Bldg., San Francisco, engr.

Bids Desired

N. J., Trenton—(Official)—Dredging—Until May 15 by State Bd. Commerce and Navigation, dredging section proposed Inland Waterway; advertised in this issue.

Ia., Emmetsburg—Drainage—Until Apr. 25 by Palo Alto County for D. D. No. 93, about 1400-ft. open ditch and 31,275-ft., tile. Former bids rejected. W. F. Eagan, audr.

Idaho Murphy—Dam and Canal System—Until Apr. 24 by J. F. Cook, secy., Murphy Irrigation Dist. completion Sinker Creek dam and canal.

Cal., Willows—(Official)—Canal—Until Apr. 25 by G. Nelson, engr. Central Jacinto Irrigation Project, Hotel Crawford, for 5¾-mi. of main canal; Sect. 1, 2.25-mi. 260,000 cu.yd. embankment, Sect, 2, 2.50-mi. 135,000-cu.yd. embankment; also furnishing and erecting 4 centrifugal pumps at site of proposed main pumping station at Sidds Landing, Glenn County.

Prices and Contracts Awarded

(★Indicates award of contract)

N. Y., Albany—(Official)—Barge Canal Work—W. W. Wotherspoon, supt. pub. wks., Capitol, received low bids, Apr. 10, Contract No. 178, Erie Canal, Sect. 9, movable dam, bulkhead, retaining walls and incidental work at Rochester from Combined Constr. Co., Rochester, $321,115; MacArthur Bros. Co., 120 Broadway, New York, $378,574; Lupfer & Remick, Ellicott Bldg., Buffalo, $389,439.

★**Ind., Bluffton**—(Official)—Drain—County let contract Daniel C. Shoemaker, Drain, Nottingham

Excavation and Dredging (Continued)

Twp., to A. Ritenour, $19,750; furnishing tile to Bluffton Cement Products Co., $3499, both of Bluffton.

★Ia., **Hampton**—Ditch—County let contract Ditch No. 48 to England & Anderson, $13,914; furnishing tile to Lehigh Clay Products Co., Lehigh, $21,000.

★**Minn., Warren**—(Official)—Ditch—County let contract, Judicial Ditch No. 29, involving 386,227 cu.yd. excavation, to Union Drainage Co., Crookston, 9.70c. per cu.yd.

★**Ia., Windom**—County let contract Ditch No. 7 to Jensen & Norgard, $10,935.

S. D., **Clear Lake**—(Official)—Drainage—County received low bid Apr. 6, drainage ditch and laying tile, from Mijomo Bros., Sioux Falls, $15,978.

★**Tex., San Benito**—Canals, etc.—A. Brown let contract dredging canals, concrete, drainage and other work for irrigation system to W. E. Callahan Constr. Co., 1517 City Natl. Bank Bldg., Omaha, $225,000. Owner will also install irrigation pumping plant, 60-in. capacity, to deliver 100,000 gal. water per minute.

★**Okla., Sallisaw**—(Official)—Drainage—Sequoyah County D. D. No. 1 let contract to Sprankle Constr., Co., 603 American Natl. Bank Bldg., Oklahoma, $57,700.

★**Colo., Denver**—Ditches—County let contract 10 lateral ditches in connection with reclamation of 30,000 acres of agricultural land on Western Slope Dist. of Colorado to Gaffy & Keefe Constr. Co., 245 Kalamath St., $116,000.

INDUSTRIAL WORKS

Proposed Work

Mass., Gardner—Central Oil & Gas Co., 205 School St., plans 3 manufacturing buildings, 3-story, 60 x 177 ft., 60 x 105-ft. and 60 x 97-ft. R. E. Coolidge, 34 Chapin St., Southbridge, archt. will soon receive bids.

N. Y., College Point—(Flushing P. O.)—See "Reinforced Concrete."

N. J., Newark—See "Reinforced Concrete."

N. J., Newark—General Electric Co., Boyd St. and 17th Ave., plans 4-story plant. J. H. & W. C. Ely, Firemen's Bldg., archts., preparing plans.

N. J., Paterson—I. A. Hall, 167 Hamilton Ave., plans 5-story, 62 x 175-ft. addition to mill. F. W. Wentworth, 140 Market St., archt., prepared plans.

N. J., West New York—Roussig Bros. plan 2-story, 80 x 189-ft., brick factory, Washington St. About $50,000. A. E. Dore, Jr., 650 Bergenline Ave., West New York, preparing plans.

Pa., Phila.—India Refining Co. plans 3-story addition to plant at Swanson and McKean St. W. C. Furber, 420 Walnut St., archt., preparing plans.

—Phila. Electric Co., 10th and Chestnut St., plans 1-story, 134 x 145-ft. substation, Fox St. and Hunting Park Ave.

—Treen Box Co., Tioga and Memphis St., plans 2-story, 60 x 100-ft. factory and 1-story, 30 x 60-ft. power house. W. E. S. Dyer, archt., 225 Harrison St., prepared plans.

—F. Weber & Co., 1125 Chestnut St., plans 5-story, 42 x 150-ft. factory. H. Miller, Crozer Bldg., archt., soon receives bids.

Pa., Wilkes-Barre—Vulcan Iron Works, Wilkes-Barre, plans additions. About $1,500,000.

Del., Wilmington—Bond Bottle Sealing Co. plans 5-story addition, 5th St. About $67,000.

Va., Alexandria—Alexandria Fertilizer & Chemical Co., c/o American Agricultural Chemical Co., State St., Boston, Mass., has had plans prepared for factory. About $70,000.

Ga., Thomasville—See "Streets and Roads."

O., Canton—Canton Metal House Co. has had plans prepared for a 1-story, 150 x 370-ft. factory. About $75,000.

O., Cleveland—Permanent Products Co. is having plans prepared for new factory and additions. Cost, including equipment, $1,000,000.

O., Osgood—See "Reinforced Concrete."

Wis., La Crosse—J. B. Funke Candy Co. plans addition to factory. About $50,000.

Wis., Milwaukee—Lee Valley Steel Co., c/o Chain Belt Co., 36 Park Ave., plans mill. W. E. Moore & Co., archts., Union Bank Bldg., Pittsburgh, prepared plans.

Wis., Sheboygan—American Manufacturing Co. plans 4-story, 70 x 180-ft. addition. W. C. Weeks, archt., preparing plans.

Ia., Ft. Dodge—Quaker Oats Co. plans 50 x 150-ft. brick and concrete warehouse, also remodeling other buildings, about $125,000, $100,000 respectively.

Ia., Sioux City—See "Reinforced Concrete."

Minn., St. Paul—Barrett & Zimmerman, Midway Horse Market, 1933 University Ave., plans 6-story, 150 x 200-ft., rein.-con. and brick warehouse, University and Prior Ave. About $150,000. S. E. Jacobson, archt., 601 Capitol Bank Bldg., preparing plans.

—Western Electric Co., 63 East 6th St., plans distributing plant, including 1-story, 100 x 210-ft. warehouse, Vandalia and Wabash St.

Kan., Topeka—See "Reinforced Concrete."

Tex., Beaumont—Lone Star Shipbuilding Co. plans plant. About $100,000.

Tex., Pharr—Pharr Mill and Elevator Co. will rebuild its alfalfa drier which was recently destroyed by fire. About $70,000.

Ore., Portland—Coast Shipbuilding Co., recently organized with $400,000 capital stock, plans plant. H. E. Pennel, pres.

Cal., Emeryville—See "Reinforced Concrete."

Cal., San Diego—G. W. Bush plans shipbuilding plant on tidelands. About $50,000.

Cal., San Francisco—Union Iron Works, 224 Spear St., plans addition to shipbuilding plant. About $5,000,000.

Ont., Toronto—Business System, Ltd., 52 Spadina Ave., plans 7-story, brick and mill factory. About $70,000.

—H. B. Johnston & Co., 137 River St., plans factory, Cornwall St. About $50,000.

Sask., Saskatoon—T. Eaton Co., Ave. D, N., plans 5-story warehouse. About $125,000. J. Woodman, archt., 302 Lindsay Bldg., Winnipeg, Man., preparing plans.

Bids Desired

W. Va., South Charleston—(Official)—Until May 1 by C. H. Higgins, archt., 165 Broadway, New York, for 5 buildings to be erected on Chesapeake & Ohio R.R. at South Charleston for E. C. Klipstein & Sons Co., 644 Greenwich St., New York. Buildings will be rein.-con. with brick curtain walls, spread footings and steel sash; Bldg. No. 5, 2-story, 13 x 29-ft.; No. 6, 3-story, 49 x 120-ft.; No. 7, 3-story, 33 x 52-ft.; No. 8, 1½-story, with platform and awning, 22 x 46-ft.; No. 9, 1½-story, with platform and awning, 22 x 40-ft.

Mich., Detroit—Until Apr. 23 by A. A. Templeton, pres. Detroit Seamless Steel Tube Co., 841 West Jefferson St., 1-story, 400 x 700-ft. factory. About $100,000.

Prices and Contracts Awarded

(★Indicates award of contract)

★**Mass., Lawrence**—Pacific Mills Corp. let contract 5-story addition to mill to L. E. Locke, Bay State Bldg.

★**N. Y., Brooklyn**—T. Houlston, 100 9th St., let contract brick storage building to G. F. Driscoll Co., 550 Union St., $60,000.

★**N. Y., New York**—J. M. Horton Ice Cream Co., 205-221 East 24th St., let contract 5-story annex to Stone & Reydel, 1370 Dean St., Brooklyn. Noted Apr. 5.

★—Locke & Co., 218 West 84th St., let contract 4-story, rein.-con. and brick factory, 56th St. and Ave. A, to J. A. Zimmerman & Son, Inc., 18 East 41st St., $100,000.

—O. Stahl, Inc., 2332 3rd Ave., let contract 4-story, brick, stone and granite packing plant, 2332 3rd Ave., East 126th St. and East 127th St. to Lustbader Constr. Co., 103 Park Ave.

—P. Weeks Estate Corp., c/o H. J. Hanigan, 2345 Broadway, let contract 5-story, brick and steel garage at 136 East 41st St., to Wells Constr. Co., 237 5th Ave., $60,000.

★**N. J., Elizabeth**—McManus Bros., 109 1st St., let contract 4-story warehouse, East Jersey St., to H. Wilhelms, 803 East Jersey St., $70,000.

★**Pa., Phila**—Electric Service Supply Co. let contract 3-story, 45 x 60-ft., brick, addition, Cambria St., to J. N. Gill, Otis Bldg., $60,000.

★—Gill Glass Co., York and Thompson St., let contract factory buildings, Tioga, Amber and Venango St., to W. R. Dougherty, 1608 Sansome St., $250,000.

★**Pa., Pottstown**—North American Motor Co., 158 Keim St., let contract factory and office building to F. H. Kaiser & Co., 128 East 4th St., $100,000.

★**Ind., Newcastle**—Indiana Rolling Mill will rebuild by day labor, 1-story, mill which was recently destroyed by cyclone. About $50,000. C. W. Mouch, pres.

★**Ill., Peoria**—American Milling Co., let contract concrete elevator to V. Jobst & Sons, 221 South Adams St., $300,000.

★**Ia., Council Bluffs**—Chicago & Northwestern Ry. let contract grain elevator to be leased to Updike Grain Co., 240 Omaha National Bank Bldg., to Witherspoon Englar Co., 53 West Jackson Blvd., Chicago, $1,000,000.

★**Neb., Omaha**—Kirchbaun & Sons, Inc., 1209 Howard St., let contract cold-storage plant and creamery, 9th and Dodge St. to R. Burke, 527 Paxton Blk., $200,000.

★**Wash., Mt. Vernon**—Dominion Commercial Co. let contract 1- and 2-story milk condensory to Finne & Gjarde, Northern Bank Bldg., Seattle, $150,000.

Wash., Selah—See "Reinforced Concrete."

Cal., Emeryville—See "Reinforced Concrete."

★**Cal., Santa Paula**—(Official)—Santa Paula Citrus Assn. will build 2-story, rein.-con. and hollow tile, fruit packing house by day labor. About $50,000.

★**Ont., London**—Hunt Milling Co. let contract flour mills to G. A. Archibald Co., Toronto, $100,000.

★**Man., Winnipeg**—City Dairy Co., 234 Pritchard Ave., let contract plant to C. H. Aldinger, 1010 Union Bank Bldg., $150,000.

BUILDINGS

Proposed work

Conn., Westport—School—Bd. Educ. plans 2-story, Myrtle Ave. About $60,000. P. N. Sunderland, archt., Danbury, prepared plans.

N. Y., Albany—Hall—St. John's Evangelical Lutheran Congregation plans, 2½-story, 50 x 102-ft. About $60,000. Y. Brant, 166 Central Ave., pastor. Loth & White, 140 State St., archts.

N. J., Paterson—School Bd. Educ. plans P. S. No. 7, 3-story, 150 x 165-ft., brick and terra cotta. Dixon and Caldwell Ave. About $125,000. C. E. Sleight, Romaine Bldg., archt. preparing plans.

N. J., Perth Amboy—Schools—See "Streets and Roads."

Pa., Harrisburg—Theater—P. Magaro, Regent Theater, Market St., plans, 2-story. About $100,000. Hoffman Co., archts., Finance Bldg., Phila., soon receives bids.

Pa., Johnson City—School—Bd. Educ. plans, 3-story, brick. About $50,000. C. S. Adams and T. J. Nolan, archts., preparing plans.

Va., Newport News—Hotel—W. Livesey, Old Dominion Land Co., 23rd St. and West Ave., plans 1-story addition. About $50,000. Ferguson, Calrow & Wrenn, archts., Virginia Bank Bldg., Norfolk, soon receive bids.

S. C., Anderson—High School—Anderson School Dist. voted $80,000 bonds to build high school.

Ga., Brunswick—See "Streets and Roads."

Tenn., Knoxville—Y. M. C. A. plans building. About $78,000.

Ky., Ashland—Bank and Office—Ashland National Bank, 16th and Winchester St., plans, 4- to 8-story, 50 x 120-ft. About $300,000. G. W. Drach, Union Trust Bldg., Cincinnati, archt.

O., Cincinnati—School—Bd. Educ. plans Hoffman School on Woodburn Ave. About $200,000. S. Hannaford & Sons, Hubert Blk., archts., preparing plans.

O., Cleveland—Store and Hotel—W. McClure, 607 Garfield Bldg., plans, 5- or 6-story, rein.-con., brick and steel. About $350,000. H. T. Jeffrey, Union Bldg., archt.

—Bank—Cleveland Trust Co., Euclid Ave. and East 9th St., plans, 1-story, 80 x 87-ft. About $50,000. G. B. Post & Sons, archts., 101 Park Ave., New York, and Schofield Bldg., Cleveland, preparing plans.

O., Deshler—Grade and High School—Bd. Educ. plans. About $60,000. C. W. Beelman, 812 2nd Natl. Bank Bldg., Toledo, archt., preparing plans.

O., Dublin—Grade and High School—Bd. Educ. voted $50,000 bonds to build school, Washington Twp. E. E. Bonham, pres. Howard & Merriam, archts., 8 East Broad St., Columbus, preparing plans.

O., Hubbard—High and Grade School—Bd. Educ. plans election to vote on $110,000 bond issue to build 2-story high and grade school. A. J. Hammond, secy. Miller & Son, Dollar Bank Bldg., Youngstown, archts.

O., Norwalk—Grade and High School—Bd. Educ. plans, 2-story. About $115,000. C. C. Patterson, supt. J. E. Scott, archt.

O., Youngstown—Bank—Commercial Bank plans 1-story addition. About $100,000. C. C. Owsley, archt., Mahoning Bank Bldg., soon receives bids.

Ind., Elkhart—Bank—First Natl. Bank purchased site at Main and High St. for bank. About $60,000.

Ind., Lafayette—Office—Lafayette Life Insurance Co., Emsing Bldg., has had plans prepared by J. F. Alexander & Son, archts., Ball Blk., for 10-story, 51 x 121-ft., 3rd and Main St. About $250,000. Westcott Engr. Co., 111 West Washington St., Chicago, cons. engrs.

Ind., Laporte—High School—Bd. Educ. plans 2-story addition. About $50,000. A. Steigley, 57 West 73rd St. and W. G. Wuehrmann, 6954 Yale Ave., Chicago, archts., preparing plans.

Ind., New Haven—High School—Bd. Educ. plans, 100 x 100-ft. About $50,000. H. Meyer, Old Natl. Bank Bldg., Ft. Wayne, archt., prepared plans.

Ind., Terre Haute—School—Bd. Educ. has had plans prepared for Sarah Scott School. Bids will soon be received. About $125,000.

Buildings (Continued)

Ill., Chicago—Bank—North West State Bank, Milwaukee and North Aves., plans. About $100,000. O. Wenderoth, archt., 907 South Michigan Ave., prepared plans.

—Temple—Northern Masonic Temple Assn. plans, 2-story, on Winthrop Ave. About $150,000 or $175,000. F. M. Glennon, 911 Winona Ave., pres.

Wis., Racine—Armory—City plans, 2-story, 112 x 120-ft. About $50,000. A. A. Guilbert, archt., Robinson Bldg., soon receives bids. Noted Apr. 12.

Ia., Des Moines—Temple—Za Ga Ziz Temple of Mystic Shrine, plans, 3-story, brick. About $200,000. C. C. Deering, 622 9th St., Potentate. Keffer & Jones, 610 Youngman Bldg., archts.

Kan., Olathe—Memorial State plans, 2-story. About $200,000. Schumacher & Atkinson, archts., 520 Mayo Bldg., Tulsa, prepared plans.

Kan., Wichita—(Official)—Theater—J. H. Cooper lets contract in July. About $50,000. Boller Bros., 7 Gayety Theater Bldg., Kansas City, Mo., archts.

Neb., Omaha—Train Storage and Employees Hotel—Chicago North Western Ry. plans. About $150,000 each. W. H. Finley, Jackson Blvd. and Franklin St., Chicago, ch. engr.

S. D., Sioux Falls—Bank and Office—Sioux Falls Natl. Bank plans, 8-story, 44 x 106-ft. About $200,000. O. Wenderoth, archt., 1907 South Michigan Ave., Chicago, prepared plans.

Tex., Calvert—School—City to vote Apr. 25 on $60,000 bonds to build school.

Tex., Houston—School—City voted $225,000 bonds to build and improve schools.

Okla., Sapulpa—High School—City voted $100,000 bonds to build school. Total cost, $175,000. R. E. Jenness, clk.

Colo., Rocky Ford—School—City to vote May 7 on $100,000 bonds to build schools.

Utah, Ogden—School—City plans election to vote on $200,000 bonds to rebuild city schools.

Ariz., Bisbee—School—Bd. Educ. voted $100,000 bonds to build school.

Cal., Azusa—School—Azusa City School Dist. will vote Apr. 30 on $50,000 bonds to build school.

Cal., Imperial—School—School Bd. plans to issue $75,000 bonds to build school. G. C. Gale, interested.

Cal., Los Angeles—See "Reinforced Concrete."

Cal., Modesto—High School—Bd. Educ. plans. About $125,000. De Remer & Hewitt, archts., prepared plans.

Cal., Nevada City—See "Reinforced Concrete."

Cal., Richmond—Bath-house—City will hold election May 1 to vote on $70,000 bonds to build bath-house.

Bids Desired

Ky., Louisville (Official)—Auditorium—Until May 30 by D. X. Murphy & Bros., archts., Louisville Trust Bldg., for auditorium for city. About $250,000.

O., Tiffin—Church and Parish House—Until Apr. 26 by Fulton & Butler, archts., 51 West Main St., Uniontown, for 1½-story, 85 x 95-ft., for First Presbyterian Congregation. About $50,000.

O., Toledo—School—Until Apr. 30 by G. L. McKesson, business mgr., Bd. Educ., Linwood Ave., for Sherman Grade School. About $200,000. E. M. Gee, 1952 Franklin Ave., archt.

S. D., Huron—(Official—High School—Until about June 1 by Bd. Educ. for Junior High School, brick. About $100,000. G. C. Miller, Fullinwider & Dowling, 6 North Michigan Ave., Chicago, archts.

Mo., Kansas City—(Official)—Exchange—Until July 15 by W. O. Pennell, ch. engr., Southwestern Bell Telephone Co., Boatmen's Bank Bldg., St. Louis. About $850,000. I. R. Timlin, Jr., Boatman's Bank Bldg., St. Louis, archt.

Wash., Aberdeen—Grade School—Until Apr. 28 by Bd. Educ., 2-story, 140 x 260-ft. About $50,000. C. E. Troutman, Electric Bldg., archt.

Prices and Contracts Awarded

(★Indicates award of contract)

★**Me., Brunswick**—Bank—First Natl. Bank of Brunswick let contract to O. Nelson, 94 Exchange St., Bangor, $75,000.

★**Mass., Boston**—Christian Endeavor Society, Tremont Temple, let contract 6-story building to W. A. & H. A. Root, Inc., 1 Beacon St., $100,000.

Mass., Dorchester—(Boston P. O.)—Bd. Educ. Boston, received low bids Sarah Greenwood School, Oliver-Wendell Holmes Dist., 2-story, 152 x 160-ft., brick and cut stone, from Murphy Constr. Co., 7 Water St., Boston, item 1, $282,100, alternate $274,950; Whiton & Haynes Co., 206 Devonshire St., Boston, item 1, $288,700, alternate, $278,000.

★**Mass., Springfield**—Hotel—W. Lay, 540 Bridge St., let contract, 4-story, to E. F. Carlson Co., 310 Main St., $175,000.

★**Conn., Hartford**—(Official)—Store—G. Fox & Co., Main St., let contract, 11-story, to J. Stewart Co., 30 Church St., New York, $1,000,000.

★**Conn., Waterbury**—School—Bd. Educ. let contract addition to Webster School to G. S. Chatfield Co., 73 Canal St.

★**Conn., Williamantic**—Office and Store—Jordan Bros. let contract, 5-story, 100 x 104-ft., on Main St., to Torrington Bldg. Co., 197 Water St., Torrington, $150,000. Noted Apr. 12.

★**N. Y., New York**—Hotel, Apartment House, Studio and Workshop—Penrhyn Stanlaws, 33 West 67th St., let contract, 15-story, to F. T. Ley, 52 Vanderbilt Ave., $600,000.

★**N. Y., Oswego**—Church—St. Mary's Congregation let contract to P. Raby, 23 West Cayuga St., $150,000.

★**N. Y., Schenectady**—Trustees Union College let contract 3-story science building to Amsterdam Bldg. Co., 140 West 42d St., New York.

★**Pa., Phila.**—School and Church—First Christion Church Congregation let contract, 1-story, to P. Barthwick, 8018 Germantown Ave., $125,000

★**Pa., South Bethlehem**—School—Bethlehem School Dist. let contract to J. Nagle, 112 South 12th St., $60,000.

★**Del., Wilmington**—Hotel and Office—E. I. du Pont de Nemours & Co., du Pont Bldg., let contract, 13-story, to Realty Constr. Co., du Pont Bldg., $600,000.

★**W. Va., Bluefield**—Theater and Arcade—S. E. Matz, Covington, let contract, 2-story, to Graham Constr. Co., Graham, Va., $100,000.

★**O., Lancaster**—Grade School—Bd. Educ. let contract to P. Shanahan, 857 Penn Ave., Columbus, $82,600.

★**O., Troy**—(Official)—School—Bd. Educ., Bethlehem Township, Rural School Dist., let contract to A. M. Fry, Piqua, $98,739.

★**Ind., Ft. Wayne**—Office—S. F. Bowser & Co. let contract to Westinghouse, Church & Kerr Co., 37 Wall St., New York, $350,000.

★**Wis., Platteville**—High School—Joint School Dist. No. 4 let contract to Bailey & Marsh, 725 Metropolitan Life Bldg., Minneapolis, $100,000.

★**Ia., Estherville**—Theater, Store and Office—H. H. Graff let contract to Madsen & Peterson, St. Paul, $150,000.

★**Kan., Clay Center**—Bank—Peoples Natl. Bank let contract, 1-story, brick, stone and terra cotta, to J. A. Black, Clay Center, $40,000.

Ark., Pine Bluff—School—See "Reinforced Concrete."

★**Cal., Fresno**—Hospital—(Official)—County let contract 2-story, brick and concrete addition to county hospital to Manning Bros., Fresno, $55,850.

—Mausoleum—I. O. O. F. lodge let contract, 60 x 150-ft. rein.-con., granite and marble, to E. M. Wheatland, Whittier, and A. H. Gregg, $150,000.

★**Cal., Sacramento**—Addition—Physicians Building Co. let contract 5-story addition to G. D. Hudnutt, California Fruit Bldg., $100,000.

FEDERAL GOVERNMENT WORK

Proposed Work

Pier—N. H., Portsmouth—Bureau Yards and Docks (F. R. Harris, ch.), Navy Dept., Wash., preparing plans pier for fitting out slip. About $15,000.

Tower—Fla., Pensacola—Bureau Yards and Docks (F. R. Harris, ch.), Navy Dept., Wash., preparing plans observation tower, Naval Aëronautical Station. About $15,000.

Bids Desired

Buildings—Pa., Ft. Mifflin—(Phila. P. O.)—Until May 7 by Bureau Yards and Docks (F. R. Harris, ch.), Navy Dept., Wash., 3 magazines and 1 shell house.

Concrete Piers and Abutments—Wash. D. C.—Until Apr. 30 by U. S. Engr. Office, Room 305, Southern Bldg., for Key Bridge across Potomac River; advertised in this issue.

Pipe Line—N. C., Ft. Caswell—Until May 7 by Constructing Quartermaster for about 9526-ft. submerged water pipe line between Southport and Ft. Caswell; advertised in this issue.

Post Office—Ga., Fitzgerald—Until May 16 by J. A. Wetmore, superv. archt., Treasury Dept., Wash.; advertised in Apr. 12 issue.

Crane—La., New Orleans—Until May 7 by Bureau Yards and Docks (F. R. Harris, ch.), Navy Dept., Wash., 20-ton floating crane. Noted Apr. 12.

Post Office—Tenn., Athens—Until May 16 by J. A. Wetmore, superv. archt., Treasury Dept., Wash.; advertised in Apr. 12 issue.

Breakwater and Riprap—O., Cleveland—Until May 11 by U. S. Engr. Office, Cleveland, repairing rubble mound cast breakwater and placing riprap in front of west breakwater at Cleveland Harbor; advertised in this issue.

Cement—O., Lowell—Until Apr. 26 by W. P. Stokey, Major, Corps of Engrs., U. S. A., Dist. Engr. Office, 2nd Dist., Room 415, Custom House, Cincinnati, furnishing and delivering 6600 bbls. American portland cement for use at Dam No. 5, Muskingum River.

Repairing Revetment—Mich., Detroit—Until May 19 by U. S. Engr. Office, Detroit, repairing wooden pile revetment of cast dike at St. Clair Flats Canal; advertised in this issue.

Revetment—Mo., Kansas City—Until May 8 by U. S. Engr. Office, Kansas City, about 8000 ft.; advertised in this issue.

Levee Work—Mo., St. Louis—Until Apr. 30 by Secy., Mississippi River Comn., 1311 International Life Bldg., St. Louis, 110,000 cu.yd. earthwork in Riverland Levee Dist.

Post Office—Tex., El Paso—Until May 18 to J. A. Wetmore, superv. archt., Treasury Dept., Wash.

Prices and Contracts Awarded

(★Indicates award of contract)

Cranes—Pa., Phila.—See "Norfolk, Va."

★**Shop—Pa., Phila.**—Bureau Yards and Docks, Navy Dept., Wash., let contract machine and electrical shop at Phila. Navy Yard to McClintic-Marshall Co., 1421 Chestnut St., $288,437.

★**Bridge—Wash., D. C.**—Dist. Comrs., Room 509 Dist. Bldg., let contract concrete bridge on Military Rd. to C. R. Tompkins, 1883 3d St., N.W., $32,000.

★**Building**—Dist. Comrs., Room 509 Dist. Bldg., let contract fish market and appurtenant buildings to Warren Moore & Co., Commercial Trust Bldg., Phila., $115,544. Noted Apr.

★**Gun Shop**—Bureau Yards and Docks, Navy Dept., Wash., let contract Washington Navy Yard, to J. H. Miller, Inc., Eutaw and Franklin Sts., Baltimore, $659,520.

Paving—Dist. Comrs., Room 509 Dist. Bldg., received low bid grading and paving alleys from Washington Asphalt Block & Tile Co., 1119 G St., N.W., grading 95c. per cu.yd.; paving on 4-in. base, $1.15 per sq.yd.; vitrified block on 4-in. base, $1.25 per sq.yd.

★**Crane Runway—Va., Norfolk**—Bureau Yards and Docks, Navy Dept., let contract, for shipbuilding slip at Norfolk Navy Yard, to McClintic-Marshall Co., 1421 Chestnut St., Phila., $427,348.

Cranes—Bureau Yards and Docks, Navy Dept., Wash., received only bid, Apr. 9, 2 electrically operated locomotive jib cranes of 50 gross tons capacity at Navy Yards, Norfolk, Va., and Phila., Pa., from Penn Bridge Co., Bond Bldg., Wash., Norfolk, $102,340; Phila., $101,340; both, $201,530.

Shipbuilding Crane—S. C. Charleston—Bureau Yards and Docks, Navy Dept. Wash., received only bid, Apr. 9, from McMyler Interstate Co., Bedford, O., Government specifications, $25,715; bidders specifications, $22,140.

Post Office—La., Alexandria—J. A. Wetmore superv. archt., Treas Dept., Wash., received only bid from W. P. Hudson, Alexandria, $70,000.

Sewage Pumping Plant—La., New Orleans—Bureau Yards and Docks, Navy Dept., Wash., received low bids, at Naval Station, (a) work complete; (b) addition in price for automatic control of motors, (c) work complete, in accordance with bidders modification, from Carroll Electric Co., 714 12th St., Wash., (a) $16,649; (b) add $250; (c) $15,649; A. M. Lockett & Co., 523 Baronne St., New Orleans, (c) work complete with automatic or hand controllers, $18,102; H. W. Bond & Bro., New Orleans, (a) $17,146; (b) add $200; Hampton Reynolds, Maison Blanche Bldg., New Orleans, (a) $18,571; (b) $18,971.

★**Post Office—O., Coshocton**—J. A. Wetmore, superv. archt., Treas. Dept., Wash., let contract to J. G. Unkefer & Co., Minerva, $69,720.

Dredging—Minn., Duluth—U. S. Engr. Office Duluth, received low bids dredging, Duluth-Superior Harbor, Minn., and Wis., from A. E. Breymann, Toledo, $368,970; Great Lakes Dredge & Dock Co., 15th Floor, Alworth Bldg., Duluth, $377,520; Duluth-Superior Dredging Co., Duluth, $377,520; Zenith Dredge Co., 303 Glencoe Bldg., Duluth, $384,780.

Earthwork, etc.—Wyo., Ft. Laramie—U. S. Rec. Ser., Ft. Laramie, let contract earthwork and structures, Ft. Laramie Canal, North Platte Irrigation Project, Nebraska-Wyoming, Schedules 1, 2, 3, 4 and 6, to Winston Bros. Co., 802 Globe Bldg., Minneapolis, $217,845; Schedules 5 and 7 to MacArthur Bros. Co. 120 Broadway, New York, $243,966.

★**Laterals—Wyo., Powell**—U. S. Rec. Ser. let contract earthwork on second unit, Frannie Division laterals, Shoshone Irrigation Project, Schedule 1 to H. S. Jolley, Lovell, $7670, Schedule 2, D. Lewis, Cowley, $10,610, Schedule 3, Tebbs & Taggart, Cowley, $19,700, Schedule 4, N. O. Mortensen, Cowley, $9440. Noted Apr. 12.

Reclamation—Mont., Ft. Shaw—U. S. Rec. Ser., Ft. Shaw, received only bid, Mar. 29, canals and structures on Sun River Project from Hayden Bros., Great Falls, $38,502.

★**Revetment—Mo., Kansas City**—U. S. Engr. Office, Kansas City, let contract, on Missouri River at Fishing River Bend to Kansas City Bridge Co., 510 Orear-Leslie Bldg., $194,854.

MISCELLANEOUS

Proposed Work

River Improvements—Mass., Boston—State appropriated $3,500,000 towards improving Merrimack River on condition that Federal Government provide similar amount.

Mezzanine Platform—N. Y., New York—Interborough Rapid Transit Co. will construct wide mezzanine to connect mezzanines at 49th St. and near 42nd St. over Times Sq. express station on Broadway subway. About $150,000. Pub. Ser. Com., 1st Dist., approved plans. F. Hedley, 165 Broadway, vice pres. and gen. mgr.

Inlet—N. J., Belmar—State Legislature appropriated $19,000 for improvements to inlet.

Garbage Plant—N. J., Bridgeton—(Official)—We have been advised that city does not plan garbage plant. W. Bacon, city engr. Noted Apr. 6.

Park Improvements—N. J., Perth Amboy—See "Streets and Roads."

Flood Protection—Pa., Erie—(Official)—City appropriated $225,000 for flood protection tunnels for east and west branches Garrison Run, not $850,000 as stated in our issue of Apr. 5. F. G. Lynch, engr.

Garbage Trucks and Fire Equipment—Pa., Steelton—City Council plans to purchase. About $25,000. C. H. Hoffer, engr.

Docks, etc.—Va., Sewalls Point—Dock Comm., Norfolk, retained W. W. Gwathmey, c/o Gwathmey Eng. Co., Norfolk, as advisory engr. and B. F. Cresson, Jr., New York, as cons. engr. for docks, ware houses, etc., at Bush Bluff, Sewalls Point. Contract will soon be let for 1st unit pier, 150 x 1000-ft.

Transmission Line—W. Va., Morgantown—West Virginia Traction & Electric Co., (Morgantown division), will erect 13,000-volt cross-country transmission line to supply power for coal mining. J. K. Buchanan, Morgantown, gen. mgr.

Fire Alarm System—Ga., Thomasville—See "Streets and Roads."

Wharf—Tenn., Chattanooga—E. Bass, comr., Dept. Streets and Sewers, is preparing plans.

Steam Roller, Etc.—Tenn., Loudon—County plans to purchase steam roller, rock crusher and tank wagon.

Park—O., Akron—Park Dirs. plans developing Silver Lake Park, for which $100,000 has already been subscribed. J. A. Gehres, city engr.

Park—O., Urbana—State Legislature appropriated $30,000 to improve Indian Lake Park. E. F. Sweetman, city engr.

Transmission Line—O., Youngstown—Youngstown & Sharon Street Ry. plans extending transmission line from Youngstown to Libson. E. H. Beil, 27 East Boardman St., mgr. of lighting.

Wharf—Tex., Houston—City acquired 20 acres land on Houston Ship Canal and plans wharf and 100 x 500-ft. rein.-con. wharf shed; apron about 500-ft. long, creosoted piling or other material. About $300,000. E. E. Sand, engr.

Dam—Tex., San Angelo—San Angelo Water, Light and Power Co. granted permission to build, across Concho River, 14-ft. high for muncipal and domestic purposes.

Retaining Wall—Ariz., Clifton—See "Structural Steel."

Harbor Improvements—Ore., Newport—(Official)—County to vote May 1 on $800,000 bonds to improve Yaquina Bay. Address Co. Clk., Toledo.

Park Improvements—Cal., Riverside—Park Bd. plans election to vote on $30,000 bonds to improve parks including building Indian Village, etc. A. P. Campbell, city engr.

Dam—Cal., San Diego—See "Reinforced Concrete."

Bids Desired

Earth Dam—Mass., Fitchburg—(Official)—Until Apr. 26 by Bd. Water Comrs., City Hall; advertised in this issue.

Coal—N. Y., Albany—(Official)—Until Apr. 27 by Pur. Com. for State Hospitals, Room 138, Capitol, furnishing anthracite coal; advertised in this issue.

Ties and Timber—N. Y., New York—Until May 2 by Pub. Ser. Comn., 120 Broadway, supply of untreated ties and timber for use in construction of rapid transit railways. O. S. Straus, chn.

Dump Carts—N. J., Jersey City—Until Apr. 24 by City Comn., furnishing and delivering 25 steel dump carts. M. I. Fagen, clk.

Garbage Furnace—Pa., Braddock—(Official)—Until Apr. 30 by W. H. Williams, supt. pub. wks., Municipal Bldg.; advertised in this issue.

Wharf—Va., Richmond—(Official)—Until June 1 by L. Rose & Co., 420 Brook Ave., 500-ft. wooden open wharf in connection with warehouse to be built for steel billets. About $10,000. F. Sternheimer, mgr. Noted Apr. 5.

Engineering Instruments—S. C., Columbia—(Official)—Until Apr. 21 by J. R. Pennell, state highway engr.; advertised in Apr. 12 isssue.

Retaining Wall—Mo., Kansas City—See "Reinforced Concrete."

Prices and Contracts Awarded

(★Indicates award of contract)

★Culverts—Minn., Buffalo—(Official)—County let contract furnishing various sizes of corrugated culverts until July, 1917, to Lyle Corrugated Culvert Co., 171 27th Ave., S. E. Minneapolis.

★Culverts—Minn., Thief River Falls—(Official) County let contract furnishing corrugated metal culverts or sectional concrete culverts for 1917 to Lyle Corrugated Culvert Co., 171 27th Ave., S. E., Minneapolis.

Proposals

For Proposals Advertised See Pages 62-63-64-65-66-67

WATER-WORKS

Bids Close		See Eng. News-Record
Apr. 23.	Rayne, La.	
Apr. 23.	Winona, Minn.	Apr. 5
Apr. 23.	Gouda Springs, Kan.	Apr. 19
Apr. 23.	Dyersburg, Tenn.	Apr. 19
Apr. 23.	Wadena, Minn.	Apr. 19
Apr. 24.	Trenton, N. J.	Apr. 19
Apr. 24.	Michigan City, Ind.	Apr. 12
Apr. 25.	Westchester, Pa.	Apr. 19
Apr. 26.	New York, N. Y.	Apr. 12
Apr. 27.	Auburn, N. Y.	Apr. 19
	Adv. Apr. 5.	Apr. 5
Apr. 30.	Evanston, Ill.	
May 1.	Mendham, N. J.	Apr. 19
May 2.	Milwaukee, Wis.	Apr. 5
	Adv. Apr. 12.	Apr. 19

SEWERS

Apr. 23.	Winona, Minn.	
Apr. 23.	Sedro Wooley, Wash.	Apr. 19
Apr. 23	North Bay, Ont.	Apr. 19
Apr. 23.	Broken Arrow, Okla.	Apr. 19
Apr. 23.	Hanover, Pa.	Apr. 19
Apr. 23.	Winona, Minn.	Apr. 12
Apr. 24.	Ottawa, Ont.	Apr. 12
Apr. 24.	Barberton, O.	Apr. 19
Apr. 27.	Valparaiso, Ind.	Apr. 5
Apr. 23.	Bedford, Ia.	Apr. 5
May 4.	Centerburg, O.	Apr. 19
	Adv. Apr. 19.	Apr. 19
May 7.	White Plains, N. Y.	
May 25.	Lakewood, O.	Apr. 19
	Adv. Apr. 19.	Apr. 19

STRUCTURAL STEEL WORK

Apr. 21.	Winchester, Ill.	
Apr. 23.	Elizabeth, N. J.	Apr. 12
Apr. 23.	Marion, Ia.	Apr. 12
Apr. 24.	Plymouth, Mass.	Apr. 19
Apr. 24.	Johnstown, Pa.	Apr. 19
	Adv. Apr. 19.	Apr. 19
Apr. 25.	Boston, Mass.	
Apr. 27.	Lockhart Mills, S. C.	Apr. 19
Apr. 30.	Leavenworth, Kan.	Apr. 19
May 7.	New York, N. Y.	Apr. 12
May 10.	Huntington, W. Va.	Apr. 19
May 10.	Wahpeton, N. D.	Apr. 19

REINFORCED CONCRETE

Apr. 20.	Massena, N. Y.	
	Adv. Apr. 19.	Apr. 19
Apr. 21.	La Junta, Colo.	
Apr. 23.	Wilkes-Barre, Pa.	Apr. 19
Apr. 23.	Lancaster, Pa.	Apr. 19
	Adv. Apr. 19.	Apr. 19
Apr. 24.	Kansas City, Mo.	
Apr. 26.	La Fayette, Ala.	Apr. 19
May 1.	Downington, Pa.	Apr. 19
May 3.	Kingwood, W. Va.	Apr. 12
May 5.	Bethany, W. Va.	Apr. 19
May 7.	Merced, Cal.	Apr. 19
May 7.	Logan, W. Va.	Apr. 19
May 8.	Visalia, Cal.	Apr. 19
May 15.	Hazard, Ky.	Apr. 12

STREETS AND ROADS

Apr. 20.	New York, N. Y.	
Apr. 20.	Otonagon, Mich.	Apr. 19
	Adv. Apr. 19.	Apr. 19
Apr. 21.	New Albany, Ind.	
Apr. 21.	Morris, Minn.	Apr. 12
Apr. 23.	Everett, Wash.	Apr. 5
Apr. 23.	South Bethlehem, Pa.	Apr. 12
	Adv. Apr. 5.	Apr. 5
Apr. 23.	Newbern, N. C.	
Apr. 23.	Bedford, Va.	Apr. 19
Apr. 23.	New Cumberland, W. Va.	Apr. 19
Apr. 24.	Franklin, Va.	Apr. 19
Apr. 24.	Cambridge, O.	Apr. 5
Apr. 24.	Denton, Md.	Apr. 12
Apr. 24.	Jersey City, N. J.	Apr. 19
Apr. 24.	Bayonne, N. J.	Apr. 19
Apr. 24.	Hartford, Conn.	Apr. 19
Apr. 24.	Wilkes-Barre, Pa.	Apr. 19
	Adv. Apr. 19.	Apr. 19
Apr. 25.	Blue Earth, Minn.	
Apr. 25.	Alexandria, O.	Apr. 5
Apr. 25.	Cleveland, O.	Apr. 5
Apr. 26.	Elly, Nev.	Apr. 19
Apr. 26.	Winchester, Ind.	Apr. 19
Apr. 26.	Brooklyn, N. Y.	Apr. 19
Apr. 27.	Clarksburg, W. Va.	Apr. 19
Apr. 27.	Clintonville, Wis.	Apr. 19
Apr. 27.	Fairmont, W. Va.	Apr. 19
	Adv. Apr. 19.	Apr. 19
Apr. 27.	Beallsville, O.	
Apr. 30.	Grove Hill, Ala.	Apr. 19
		Apr. 5
Apr. 30.	Montesano, Wash.	
Apr. 30.	Greenville, Tenn.	Apr. 19
Apr. 30.	Knoxville, Tenn.	Apr. 19
May 1.	Baltimore, Md.	Apr. 19
	Adv. Apr. 19.	Apr. 19
May 1.	Albany, N. Y.	
	Adv. Apr. 19.	Apr. 19
May 1.	Lewisburg, Va.	
May 1.	San Juan Capistrano	Apr. 19
May 2.	Lancaster, O.	Apr. 19
May 3.	Barnesville, Ga.	Apr. 19
	Adv. Apr. 19.	Apr. 19
May 4.	Beckley, W. Va.	
	Adv. Apr. 19.	Apr. 19
May 7.	Mountain City, Tenn.	
May 7.	Indiana, Ind.	Apr. 19
May 8.	Vincennes, Ind.	Apr. 19
	Adv. Apr. 19.	Apr. 19
May 8.	Wenatchie, Wash.	
May 8.	Bloomfield, Ind.	Apr. 19
May 8.	Roxboro, N. C.	Apr. 19
May 8.	Pickers, N. C.	Apr. 19
May 14.	Oil City, Pa.	Apr. 19
	Adv. Apr. 19.	Apr. 19

RAILWAYS

May 2.	Mandan, N. D.	
	Adv. Apr. 19.	Apr. 19

EXCAVATION AND DREDGING

Apr. 24.	Parkertown, N. J.	
Apr. 24.	Murphy, Idaho	Apr. 5
Apr. 25.	Emmetsburg, Ia.	Apr. 19
Apr. 25.	Winterset, Ia.	Apr. 19
Apr. 25.	Willows, Cal.	Apr. 12
May 1.	Quincy, Ill.	Apr. 19
	Adv. Apr. 5.	Apr. 5
May 15.	Trenton, N. J.	Apr. 19

BUILDINGS

Apr. 23.	Kahoka, Mo.	
Apr. 28.	Aberdeen, Wash.	Apr. 12
Apr. 28.	Stratford, Conn.	Apr. 19
Apr. 30.	Toledo, O.	Apr. 19
Apr. 30.	Louisville, Ky.	Apr. 19
May 15.	Fulton, Mo.	Apr. 19
July 15.	Kansas City, Mo.	Apr. 12
		Apr. 19

INDUSTRIAL WORKS

Apr. 23.	Detroit, Mich.	
May 1.	St. Charleston, W. Va.	Apr. 19
		Apr. 19

FEDERAL GOVERNMENT WORK

Apr. 21.	Wash., D. C.	
	Adv. Apr. 5.	Apr. 5
Apr. 23.	Norfolk, Va.	
Apr. 23.	Portland, Me.	Apr. 12
	Adv. Apr. 5.	Apr. 5
Apr. 23.	Indian Head, Md.	
Apr. 23.	Wash., D. C.	Apr. 5
Apr. 23.	Pensacola, Fla.	Apr. 5
Apr. 25.	Little Rock, Ark.	Apr. 5
	Adv. Apr. 5.	Apr. 5
Apr. 26.	Lowell, O.	
Apr. 27.	Portland, Me.	Apr. 19
Apr. 30.	Wheeling, W. Va.	Apr. 5
	Adv. Apr. 5.	Apr. 5
Apr. 30.	Dallas, Tex.	
	Adv. Apr. 5.	Apr. 5
Apr. 30.	Washington, D. C.	
	Adv. Apr. 19.	Apr. 19
Apr. 30.	St. Louis, Mo.	
May 1.	Sault Ste. Marie, Mich.	Apr. 19
	Adv. Apr. 5.	Apr. 5
May 1.	Powell, Wyo.	
	Adv. Apr. 5.	Apr. 5
May 2.	Narragansett Pier, R. I.	
May 3.	Port Huron, Mich.	Apr. 12
	Adv. Apr. 5.	Apr. 5
May 3.	New York, N. Y.	
May 4.	Chattanooga, Tenn.	Apr. 12
	Adv. Apr. 5.	Apr. 5
May 7.	Beaver Dam, Wis.	
May 7.	Pearl Harbor, Hawaii	Apr. 5
May 7.	Ft. Caswell, N. C.	Apr. 5
	Adv. Apr. 19.	Apr. 19
May 7.	Ft. Mifflin, (Philadelphia P. O.)	Apr. 19
May 7.	New Orleans, La.	Apr. 19
May 8.	Media, Pa.	Apr. 19
May 9.	Kansas City, Mo.	Apr. 12
May 10.	Detroit, Mich.	Apr. 19
	Adv. Apr. 19.	Apr. 19
May 11.	Boise, Idaho	
May 11.	Cleveland, O.	Apr. 5
	Adv. Apr. 19.	Apr. 19
May 15.	Bolinas, Cal.	
	Adv. Apr. 5.	Apr. 5
May 16.	Fitzgerald, Ga.	
	Adv. Apr. 12.	Apr. 19
May 16.	Athens, Tenn.	
	Adv. Apr. 12.	Apr. 19
May 17.	Cedar Falls, Ia.	
May 18.	El Paso, Tex.	Apr. 12
		Apr. 19

MISCELLANEOUS

Apr. 23.	Stillwater, Minn.	
Apr. 23.	Garbage Disposal—Salem, N. J.	Apr. 5
Apr. 24.	Dump Cars—Jersey City, N. J.	Apr. 19
Apr. 25.	Pikeville, Ky.	Apr. 19
Apr. 26.	Dam—Fitchburg, Mass.	Apr. 5
	Adv. Apr. 19.	Apr. 19
Apr. 27.	Coal—Albany, N. Y.	
	Adv. Apr. 19.	Apr. 19
Apr. 30.	Garbage Furnace—Braddock, Pa.	Apr. 19
	Adv. Apr. 19.	
May 2.	Toes and Timber—New York City	Apr. 19
May 7.	Pine Bluff, Ark.	Apr. 5
June 1.	Wharf—Richmond, Va.	Apr. 19

SUBWAY, PHILADELPHIA, PA.

Contract No. 104

W. S. Twining, Dir. Dept. City Transit, 754 Rourse Bldg., received bids, Apr. 3, section Delivery Loop Subway in Broad St. from (A) Philadelphia Subway Constr. Co., 712 Lincoln Bldg.; (B) Keystone State Constr. Co., 704-9 Pennsylvania Bldg.; (C) Smith, Hauser & Mac Isaac, Inc., 1 East 41st St., New York; (D) Underpinning & Foundation Co., 290 Broadway, New York; (E) E. E. Smith Constr. Co., Long Island City, N. Y.; (F) Dock Contr. Co., 95 River St., Hoboken, N. J. The item bids were as follows:

	A	B	C	D	E	F
315,000 cu.yd. excavation above elevation zero	4 81	4 55	5 70	3 60	4 90	4 40
100 cu.yd. excavation below elevation zero	6 00	6 00	1 00	4 00	4 90	7 00
100,000 ft.b.m. yellow pine lumber	55 00	110 00	50 00	50 00	60 00	50 00
Underpinning:						
1,100 ft. front, buildings 5 stories or less in height	75 00	40 00	62 00	60 00	50 00	60 00
200 ft. front, buildings over 5 and less than 10 stories in height	175 00	50 00	136 00	160 00	100 00	100 00
210 ft. front, buildings 10 stories or over in height	175 00	75 00	136 00	200 00	125 00	140 00
500 cu.yd. additional masonry for underpinning	18 00	8 00	16 50	10 00	1 00	12 00
Concrete Masonry:						
100 cu.yd. Class A-1:1½:3	20 00	40 00	14 70	12 50	16 00	12 00
39,500 cu.yd. Class B-1:2:4	10 50	12 00	13 47	12 00	12 25	10 40
2,750 cu.yd. Class C-1:3:6	10 00	11 50	13 00	11 00	11 00	9 50
500 cu.yd. Class D-1:4:8	9 00	11 00	10 10	10 00	10 00	9 00
2,000 sq.ft. reinforced concrete sheathing	1 00	1 00	50	2 00	1 00	60
500 cu.yd. brick masonry	16 00	30 00	19 20	18 00	20 00	15 00
200 cu.yd. hollow terra cotta brick masonry	16 00	25 00	14 00	18 00	20 00	15 00
200 cu.yd. rubble masonry	8 00	15 00	10 10	9 00	11 00	5 00
1,400 sq.yd. citrified shale brick sewer lining	2 50	3 00	2 00	3 00	3 00	2 50
100 sq.yd. granite block sewer lining	3 50	3 00	2 50	3 00	3 00	3 00
Building New Manholes and Wellholes:						
28 manholes	140 00	150 00	85 00	130 00	150 00	60 00
150 vert.ft. wellholes	6 50	12 00	8 00	9 00	11 25	6 00
Building New Inlets:						
5 No. 1 inlets	120 00	200 00	135 00	150 00	150 00	100 00
5 No. 2 inlets	100 00	200 00	115 00	140 00	150 00	100 00
5 No. 3 inlets	85 00	200 00	93 00	125 00	150 00	100 00
5 No. 4 inlets	75 00	200 00	60 00	115 00	150 00	50 00
Taking Out and Rebuilding Inlets:						
15 inlets having standard pattern casting	60 00	150 00	60 00	125 00	125 00	40 00
5 inlets having old pattern casting to be replaced by standard	75 00	200 00	60 00	150 00	125 00	40 00
Flagstones:						
100 sq.ft. 2-in. thickness	50	50	40	30	40	40
100 sq.ft. 4-in. thickness	60	80	60	50	80	60
100 sq.ft. 6-in. thickness	75	1 50	80	75	1 00	80
100 cu.yd. dry rubble masonry or riprap	5 00	15 00	4 00	6 00	10 00	2 00
300 cu.yd. broken stone or gravel for drains	3 00	2 50	2 50	2 50	3 75	2 00
2,000 bags cement grout	1 00	1 00	70	1 10	1 00	1 25
7,800 sq.yd. granolithic finish	1 40	1 50	1 00	1 75	2 25	1 00
Fabric Waterproofing:						
1,000 sq.yd. 1-ply in asphaltic compound	85	1 50	1 00	70	1 20	70
500 sq.yd. 2-ply in asphaltic compound	1 50	2 50	1 55	1 00	2 20	1 10
500 sq. yd. 3-ply in asphaltic compound	2 00	3 50	2 11	1 40	2 55	1 50
500 sq.yd. 4-ply in asphaltic compound	2 50	4 50	2 25	1 80	3 35	1 90
1,000 sq.yd. 1-ply in coal tar pitch	85	1 00	95	65	1 00	70
500 sq.yd. 2-ply in coal tar pitch	1 50	1 50	1 50	95	1 70	1 10
500 sq.yd. 3-ply in coal tar pitch	2 00	2 00	2 03	1 30	2 40	1 50
500 sq.yd. 4-ply in coal tar pitch	2 50	2 75	2 25	1 60	3 10	1 90
3,000 sq.yd. 1-ply dry roofing felt	50	60	25	60	40	40
30,000 sq.yd. asphaltic mastic waterproofing	2 00	2 25	2 16	2 00	2 00	1 70
Brick in Waterproofing Compound:						
100 cu.yd. in asphaltic compound	30 00	35 00	35 00	28 00	36 00	29 00
100 cu.yd. in coal tar pitch	30 00	35 00	33 00	26 00	30 00	29 00
Vitrified Clay Pipe:						
3,100 lin.ft. 4-in.	40	50	27	40	40	30
2,000 lin.ft. 5-in. or 6-in.	55	60	39	50	50	50
2,400 lin.ft. 8-in. or 10-in.	75	1 00	78	60	70	50
2,800 lin.ft. 12-in.	1 00	1 75	94	1 00	1 00	1 00
3,200 lin.ft. 15-in. or 18-in.	1 75	2 75	1 74	1 50	2 00	3 00
100 lin.ft. 20-in.	2 50	4 00	2 00	2 00	2 50	4 00
100 lin.ft. 24-in.	4 00	5 00	2 75	2 50	3 00	5 00
Extra Heavy Cast Iron Soil Pipe:						
400 lin.ft. 3-in.	55	3 00	1 00	50	1 00	50
500 lin.ft. 4-in.	90	3 50	1 25	80	1 50	60
1,000 lin.ft. 5-in.	1 00	3 75	1 75	1 00	1 80	80
2,000 lin.ft. 6-in.	1 25	4 00	2 25	1 25	2 00	1 20
Cast Iron Pipe Furnished:						
400 net tons bell and spigot straight	65 00	80 00	68 40	70 00	60 00	56 00
100 net tons bell and spigot special castings	125 00	125 00	125 00	120 00	120 00	100 00
25 net tons high-pressure straight	120 00	120 00	85 00	95 00	80 00	100 00
10 net tons high-pressure special castings	200 00	200 00	150 00	175 00	160 00	180 00
Laying and Taking Out Cast Iron Pipe:						
750 net tons laying bell and spigot pipe, special castings and fittings	17 50	40 00	18 00	50 00	30 00	18 00
50 net tons laying high-pressure pipe, special castings and fittings	30 00	60 00	20 00	50 00	35 00	20 00
600 net tons taking out bell and spigot pipe, spec. cast. and fittings	8 00	30 00	21 00	15 00	24 00	7 00
50 net tons taking out high-pressure pipe, special cast. and fittings	12 00	50 00	21 00	15 00	35 00	7 00
Bell End Water Gate Valves:						
1 36-in. geared gate valve	700 00	1,200 00	1,117 00	1,100 00	1,000 00	920 00
3 30-in. geared gate valves	400 00	850 00	771 00	800 00	800 00	600 00
1 24-in. gate valve	250 00	550 00	422 00	400 00	600 00	300 00
2 20-in. gate valves	150 00	300 00	264 00	260 00	375 00	240 00
2 16-in. gate valves	100 00	200 00	184 00	180 00	300 00	130 00
7 12-in. gate valves	60 00	110 00	100 00	100 00	225 00	70 00
3 10-in. gate valves	50 00	90 00	84 00	72 00	150 00	50 00
4 8-in. gate valves	45 00	50 00	54 00	50 00	100 00	50 00
6 6-in. gate valves	40 00	35 00	43 00	30 00	75 00	35 00
5,000 lb. wrought iron or steel pipe, any size	08	10	11	15	10	08
Wrought Iron or Steel Pipe Conduit:						
6,000 lin.ft. ¾-in. or 1-in. enameled conduit	25	25	14	30	25	30
1,500 lin.ft. 1¼-in. or 1½-in. enameled conduit	35	40	30	36	40	40
500 lin.ft. 2½-in. galvanized conduit	70	70	55	60	60	60
7,500 lin.ft. 3-in. galvanized conduit	90	80	71	90	70	80
1,000 lin.ft. 3½-in. galvanized conduit	1 25	1 00	88	1 10	1 00	1 00
400 net tons hauling pipe and fittings to and from city storeyard	4 00	10 00	6 50	3 00	2 50	2 00
50,000 lb. miscellaneous iron castings	05	10	07	08	08	08
100,000 duct.ft. terra cotta ducts	10	15	125	15	16	14
20,000 duct.ft. relocating city ducts and conduits	40	1 00	50	50	1 00	20
Structural Steel:						
2,180,000 lb. steel columns	085	07	067	07	06	067
980,000 lb steel I beams, used as columns	085	07	067	07	06	067
4,450,000 lb. steel I beams and channels in roofs and floors	085	07	067	07	06	067
30,000 lb. riveted plate or lattice girders	085	07	067	07	06	067
50,000 lb. riveted struts and miscellaneous steel work	085	07	067	07	06	067
130,000 lb. tie rods, bolts, nuts, washers, dowels and anchor bolts	085	07	067	07	06	067
100 net tons interlocking steel sheet piling	120 00	125 00	90 00	120 00	80 00	120 00
Steel Pipe Piles:						
100 vert.ft. 12-in.	6 00	7 00	3 00	8 00	6 00	4 00
1,000 vert.ft. 15-in.	10 00	7 50	4 00	10 00	7 50	6 00
660,000 lb. steel reinforcing rods and bars	06	05	048	06	07	06
80,000 lb. steel wire lath, forms and anchors	25	15	19	20	25	20
3,000 sq.ft. steel ventilation gratings	2 00	2 00	2 00	2 50	1 50	80
430,000 sq.ft. painting steel work	07	07	04	10	07	05

	A	B	C	D	E	F
Continued						
7,000 sq.ft. safety treads	2 00	1 60	2 00	1 50	1 50	2 50
4,500 sq.ft. vault lights	1 75	1 65	1 50	1 75	1 50	1 50
Cartway Paving:						
32,200 sq.yd. asphalt	3 50	4 00	2 15	4 00	4 00	3 50
100 sq.yd. new wood block	4 50	5 50	7 00	4 50	4 00	4 00
100 sq.yd. new granite block	4 50	5 00	7 00	4 00	4 00	4 00
100 sq.yd. new vitrified block	4 00	5 00	7 00	4 50	4 00	4 00
Sidewalk Paving:						
2,000 sq.yd. granolithic	2 00	2 00	1 50	2 00	3 00	1 80
100 sq.yd. brick	2 00	2 50	1 50	2 00	3 00	1 00
2,500 sq.yd. flagstone	1 75	2 00	2 00	2 50	25	1 00
Curbing:						
200 lin.ft. 6-in. straight granite	2 25	2 00	2 00	2 00	1 60	1 50
500 lin.ft. 8-in. straight granite	2 75	2 50	2 60	2 50	2 40	2 30
100 lin.ft. 6-in. curved granite	3 00	3 50	2 80	3 50	3 00	2 40
200 lin.ft. 8-in. curved granite	3 50	4 00	3 10	4 00	4 00	2 70
500 lin.ft. steel edge concrete	1 20	1 50	1 25	1 00	75	1 25
4,000 lin.ft. resetting curb	40	1 00	35	30	30	25
$50,000 force account—expenditure	25%	20%	35%	30%	30%	25%
Extended totals	$3,273,550	$3,171,505	$3,461,628	$2,885,941	$3,186,062 50	$2,919,270

SUBWAY, PHILADELPHIA, PA.

Contract No. 103

W. S. Twining, Dir. Dept. City Transit, 754 Bourse Bldg., received bids, Apr. 3, section Delivery Loop Subway in Broad St. from (A) Keystone State Constr. Co., 704-9 Pennsylvania Bldg.; (B) Philadelphia Subway Constr. Co., 712 Lincoln Bldg.; (C) Smith, Hauser & Mac Isaac, Inc., 18 East 41st St., New York; (D) Underpinning & Foundation Co., 290 Broadway, New York. The item bids were as follows:

	A	B	C	D
258,000 cu.yd. excavation above elevation zero	$3 75	$4 55	$5 50	$4 05
22,400 cu.yd. excavation below elevation zero	4 00	5 25	5 50	7 00
100,000 ft.b.m. yellow pine lumber	50 00	110 00	75 00	50 00
Underpinning:				
1,500 ft. front, buildings 5 stories or less in height	80 00	40 00	50 00	60 00
500 ft. front, buildings over 5 and less than 10 stories in height	240 00	40 00	125 00	100 00
65 ft. front, buildings 10 stories or over in height	300 00	80 00	200 00	140 00
500 cu.yd. additional masonry for underpinning	10 00	8 00	1 00	12 00
Broad Street station, lump sum	20,000 00	7,000 00	25,000 00	15,500 00
Philadelphia and Reading Railundercrossing, lump sum	30,000 00	150,000 00	140,000 00	80,000 00
Concrete Masonry:				
100 cu.yd. Class A-1:1½:3	12 50	40 00	16 00	12 00
33,800 cu.yd. Class B-1:2:4	12 00	12 00	12 25	10 60
2,500 cu.yd. Class C-1:3:6	11 00	11 50	11 00	9 80
500 cu.yd. Class D-1:4:8	10 00	11 00	10 00	9 00
4,000 sq.ft. reincreced concrete sheathing	2 00	1 00	1 00	60
500 cu.yd. brick masonry	18 00	30 00	20 00	15 00
200 cu.yd. hollow terra cotta brick masonry	18 00	25 00	20 00	15 00
100 cu.yd. rubble masonry	9 00	15 00	11 00	3 00
200 sq.yd. vitrified shale brick sewer lining	3 00	3 00	3 00	2 50
100 sq.yd. granite block sewer lining	3 00	3 00	3 00	3 00
Building New Manholes and Wellholes:				
12 manholes	130 00	150 00	150 00	60 00
100 vert.ft. wellholes	9 00	12 00	11 25	6 00
Building New Inlets:				
5 No. 1 inlets	150 00	200 00	150 00	100 00
5 No. 2 inlets	140 00	200 00	150 00	100 00
5 No. 3 inlets	125 00	200 00	150 00	100 00
5 No. 4 inlets	115 00	200 00	150 00	50 00
Taking Out and Rebuilding Inlets:				
5 inlets having standard pattern casting	125 00	150 00	125 00	40 00
5 inlets having old pattern casting to be replaced by standard	150 00	200 00	125 00	40 00
Flagstones:				
100 sq.ft. 2-in. thickness	30	50	40	40
100 sq.ft. 4-in. thickness	50	80	80	60
100 sq.ft. 6-in. thickness	75	1 50	1 00	80
100 cu.yd. dry rubble masonry or riprap	6 00	15 00	10 00	2 00
200 cu.yd. broken stone or gravel for drains	2 50	2 50	3 75	2 00
2,000 bags cement grout	1 10	1 00	1 00	1 25
3,500 sq.yd. granolithic finish	1 75	1 50	2 25	1 00
Fabric Waterproofing:				
7,500 sq.yd. 1-ply in asphaltic compound	70	1 50	1 20	70
500 sq.yd. 2-ply in asphaltic compound	1 00	2 50	2 20	1 10
500 sq.yd. 3-ply in asphaltic compound	1 40	3 50	2 55	1 50
500 sq.yd. 4-ply in asphaltic compound	1 80	4 50	3 35	1 90
7,500 sq.yd. 1-ply in coal tar pitch	65	1 00	1 00	70
500 sq.yd. 2-ply in coal tar pitch	95	1 50	1 70	1 10
500 sq.yd. 3-ply in coal tar pitch	1 30	2 00	2 40	1 50
500 sq.yd. 4-ply in coal tar pitch	1 60	2 75	3 10	1 90
2,000 sq.yd. 1-ply dry roofing felt	60	60	40	40
21,000 sq.yd. asphaltic mastic waterproofing	2 00	2 25	2 00	1 70
Brick in Waterproofing compound:				
1,200 cu.yd. in asphaltic compound	28 00	35 00	36 00	29 00
1,200 cu.yd. in coal tar pitch	26 00	35 00	30 00	29 00
Vitrified Clay Pipe:				
2,100 lin.ft. 4-in.	40	50	40	30
2,000 lin.ft. 5-in. or 6-in.	50	60	50	50
4,500 lin.ft. 8-in. or 10-in.	60	1 00	70	50
500 lin.ft. 12-in.	1 00	1 75	1 00	1 00
1,500 lin.ft. 15-in. or 18-in.	1 50	2 75	2 00	3 00
100 lin.ft. 20-in.	2 00	4 00	2 50	4 00
100 lin.ft. 24-in.	2 50	5 00	3 00	5 00

	A	B	C	D
Extra Heavy Cast Iron Soil Pipe:				
300 lin.ft. 3-in.	50	3 00	1 00	50
400 lin.ft. 4-in.	80	3 50	1 50	60
1,000 lin.ft. 5-in.	1 00	3 75	1 80	80
1,500 lin.ft. 6-in.	1 25	4 00	2 00	1 20
Cast Iron Pipe Furnished:				
175 net tons bell and spigot straight	70 00	80 00	60 00	56 00
50 net tons bell and spigot special castings	120 00	125 00	120 00	100 00
25 net tons high-pressure straight	95 00	120 00	80 00	100 00
10 net tons high-pressure special castings	175 00	200 00	160 00	180 00
5 net tons high-pressure cast steel special castings furnished	220 00	350 00	300 00	300 00
Laying and Taking Out Cast Iron or Steel Pipe:				
225 net tons laying bell and spigot pipe, special cast. and fittings	50 00	40 00	30 00	18 00
30 net tons laying high-pressure pipe, special cast. and fittings	50 00	60 00	35 00	20 00
150 net tons taking out bell and spigot pipe, spec. cast. and fittings	15 00	30 00	24 00	7 00
30 net tons taking out high-pressure pipe, special cast. and fittings	15 00	50 00	35 00	7 00
25 net tons taking out and disposing of 48-in. steel pipe	20 00	20 00	35 00	7 00
Bell End Water Gate Valves:				
1 36-in. geared gate valve	1,100 00	1,200 00	1,000 00	920 00
4 30-in. geared gate valves	800 00	850 00	800 00	600 00
1 24-in. gate valve	400 00	550 00	600 00	300 00
4 20-in. gate valves	260 00	300 00	375 00	240 00
2 16-in. gate valves	180 00	200 00	300 00	130 00
5 12-in. gate valves	100 00	110 00	225 00	70 00
5 10-in. gate valves	72 00	90 00	150 00	50 00
4 8-in. gate valve	50 00	50 00	100 00	50 00
10 6-in. gate valves	30 00	35 00	75 00	35 00
5,000 lb. wrought iron or steel pipe, any size	15	10	10	08
Wrought Iron or Steel Pipe Conduit:				
2,500 lin.ft. ¾-in. or 1-in. enameled conduit	31	25	25	30
1,000 lin.ft. 1¼-in. or 1½-in. enameled conduit	36	40	40	40
500 lin.ft. 2½-in. galvanized conduit	60	70	60	60
5,000 lin.ft. 3-in. galvanized conduit	90	80	70	80
1,000 lin.ft. 3½-in. galvanized conduit	1 10	1 00	1 00	1 00
200 net tons hauling pipe and fittings to or from city storeyard	3 00	10 00	2 50	2 00
50,000 lb. miscellaneous iron castings	08	10	08	08
75,000 duct ft. terra cotta ducts	15	15	16	14
20,000 duct ft. relocating city ducts and conduits	50	1 00	1 00	20
Structural Steel:				
2,350,000 lb. steel columns	07	071	06	07
1,300,000 lb. steel I-beams used as columns	07	071	06	07
3,350,000 lb. steel I-beams and channels in roofs and floors	07	071	06	07
1,128,000 lb. riveted plate or lattice girders	07	071	06	07
50,000 lb. riveted struts and miscellaneous steel work	07	071	06	07
110,000 lb. tie rods, bolts, nuts, washers, dowels and anchor bolts	07	071	06	07
100 net tons interlocking steel sheet piling	120 00	125 00	80 00	120 00
Steel Pipe Piles:				
100 vert.ft. 12-in.	8 00	7 00	6 00	4 00
1,000 vert. ft. 15-in.	10 00	7 50	7 50	6 00
700,000 lb. steel reinforcing rods and bars	06	05	07	06
10,000 lb. steel wire lath, forms and anchors	20	15	25	20
2,000 sq.ft. steel ventilation gratings	2 50	2 00	1 50	80
100,000 sq.ft. painting steel work	10	07	07	05
3,500 sq.ft. safety treads	1 50	1 60	1 50	2 50
1,500 sq.ft. vault lights	1 75	1 65	1 50	1 50
Cartway Paving:				
20,00 sq.yd. asphalt	4 00	4 00	4 00	3 50
100 sq.yd. new wood block	4 50	5 50	4 00	4 00
100 sq.yd. new granite block	4 00	5 00	4 00	4 00
100 sq.yd. new vitrified block	4 50	5 00	4 00	4 00
2,500 sq.yd. granolithic	2 00	2 00	3 00	1 80
100 sq.yd. brick	2 00	2 50	3 00	1 00
750 sq.yd. flagstone	2 50	2 00	25	1 00

Continued	A	B	C	D
Sidewalk Paving—Curbing:				
200 lin.ft. 6-in. straight granite	2 00	2 00	1 60	1 50
500 lin.ft. 8-in. straight granite	2 50	2 50	2 40	2 30
100 lin.ft. 6-in. curved granite	3 50	3 50	3 00	2 40
200 lin.ft. 8-in. curved granite	4 00	4 00	4 00	2 70
500 lin.ft. steel edge concrete	1 00	1 50	.75	1 25
3,000 lin.ft. resetting curb	.30	1 00	.30	.25
$50,000 force account—expenditure	30%	20%	30%	25%
Extended totals	$2,846,240	$3,090,103	$3,292,767 50	$2,815,240

SUBWAY, PHILADELPHIA, PA.

Contract No. 204

W. S. Twining, Dir. Dept. City Transit, 754 Bourse Bldg., received bids, Apr. 3, section Delivery Loop Subway in Broad St. from. (A) Keystone State Constr. Co., 704-9 Pennsylvania Bldg.; (B) Smith, Hauser & Mac Isaac, Inc., 18 East 41st St., New York; (C) Philadelphia Subway Constr. Co., Lincoln Bldg.; (D) Underpinning & Foundation Co., 290 Broadway, New York. The item bids were as follows:

	A	B	C	D
300,500 cu.yd. excavation above elevation zero	$5 50	$4 25	$3 80	$4 55
5,250 cu.yd. excavation below elevation zero	5 50	5 00	7 00	5 05
100,000 ft.b.m. yellow pine lumber	60 00	50 00	50 00	110 00
Underpinning:				
1,400 ft. front, buildings 5 stories or less in height	50 00	50 00	60 00	42 00
200 ft. front, buildings over 5 stories and less than 10 stories in height	100 00	75 00	100 00	60 00
50 ft. front, buildings 10 stories or over in height	125 00	150 00	140 00	90 00
500 cu.yd. additional masonry for underpinning	1 00	10 00	12 00	8 00
West End Trust building, lump sum	36,000 00	24,000 00	14,000 00	19,000 00
Girard Trust building, lump sum	30,000 00	26,000 00	60,000 00	18,000 00
Lincoln building, lump sum	51,000 00	40,000 00	54,000 00	20,000 00
Liberty building, lump sum	40,000 00	33,500 00	25,000 00	19,000 00
Real Estate Trust and Hallowell buildings, lump sum	51,000 00	60,500 00	65,000 00	31,000 00
North American building, lump sum	16,000 00	5,000 00	5,800 00	1,000 00
Land Title and Trust building, lump sum	86,000 00	91,000 00	118,000 00	39,000 00
Manufacturers' Club building, lump sum	33,000 00	10,000 00	16,000 00	2,000 00
Bellevue-Stratford Hotel building, lump sum	17,000 00	5,000 00	22,000 00	4,000 00
Ritz-Carlton Hotel building, lump sum	1,000 00	5,000 00	4,500 00	1,000 00
Art Club of Philadelphia building, lump sum	4,000 00	15,000 00	15,000 00	8,000 00
Walton Hotel building, lump sum	17,000 00	9,000 00	6,000 00	8,000 00
Stenton Hotel building, lump sum	5,000 00	10,000 00	3,000 00	8,500 00
Concrete Masonry:				
100 cu.yd. Class A-1:½:3	16 00	12 50	12 00	40 00
38,400 cu.yd. Class B-1:2:4	12 25	12 00	10 60	12 00
3,000 cu.yd. Class C-1:3:6	11 00	11 00	9 80	11 50
500 cu.yd. Class D-1:4:8	10 00	10 00	9 00	11 00
4,000 sq.ft. reinforced concrete sheathing	1 00	2 00	60	1 00
500 cu.yd. brick masonry	20 00	18 00	15 000	30 00
500 cu.yd. hollow terra cotta brick masonry	20 00	18 00	15 00	25 00
200 cu.yd. rubble masonry	11 00	9 00	3 00	15 00
100 sq.yd. vitrified shale brick sewer lining	3 00	3 00	2 50	3 00
100 sq.yd. granite block sewer lining	3 00	3 00	3 00	3 00
Building New Manholes and Wellholes:				
30 manoles	150 00	130 00	60 00	150 00
100 vert.ft. wellholes	11 25	9 00	6 00	12 00
Building New Inlets:				
5 No. 1 inlets	150 00	150 00	100 00	200 00
5 No. 2 inlets	150 00	140 00	100 00	200 00
5 No. 3 inlets	150 00	125 00	100 00	200 00
5 No. 4 inlets	150 00	115 00	50 00	200 00
Taking Out and Rebuilding Inlets:				
25 inlets having standard pattern casting	125 00	125 00	40 00	150 00
5 inlets having old pattern casting to be replaced by standard	125 00	150 00	40 00	200 00
Flagstones:				
100 sq.ft. 2-in. thickness	.40	.30	.40	.50
100 sq.ft. 4-in. thickness	.80	.50	.60	.80
100 sq.ft. 6-in. thickness	1 00	.75	.80	1 50
100 cu.yd. dry rubble masonry or riprap	10 00	6 00	2 00	15 00
200 cu.yd. broken stone or gravel for drains	3 75	2 50	2 00	2 50
3,000 bags cement grout	1 00	1 10	1 25	1 00
9,200 sq.yd. granolithic finish	2 25	1 75	1 00	1 50
Fabric Waterproofing:				
7,100 sq.yd. 1-ply in asphaltic compound	1 20	.70	.70	1 50
500 sq.yd. 2-ply in asphaltic compound	2 20	1 00	1 10	2 50
500 sq.yd. 3-ply in asphaltic compound	2 55	1 40	1 50	3 50
500 sq.yd. 4-ply in asphaltic compound	3 35	1 80	1 90	4 50
7,000 sq.yd. 1-ply in coal tar pitch	1 00	.65	.70	1 00
500 sq.yd. 2-ply in coal tar pitch	1 70	.95	1 10	1 50
500 sq.yd. 3-ply in coal tar pitch	2 40	1 30	1 50	2 00
500 sq.yd. 4-ply in coal tar pitch	3 10	1 60	1 90	2 75
2,000 sq.yd. 1-ply dry roofing felt	.40	.60	.40	.60
24,000 sq.yd. asphaltic mastic waterproofing	2 00	2 00	1 70	2 25
Brick in Waterproofing Compound:	A	B	C	D
1,000 cu.yd. in asphaltic compound	36 00	28 00	29 00	35
1,000 cu.yd. in coal tar pitch	30 00	26 00	29 00	35
Vitrified Clay Pipe:				
3,700 lin.ft. 4-in	40	40	30	
2,000 lin.ft. 5-in. or 6-in	50	50	50	
1,500 lin.ft. 8-in. or 10-in	70	60	50	1 00
1,000 lin.ft. 12-in	1 00	1 00	1 00	1 25
4,000 lin.ft. 15-in. or 18-in	2 00	1 50	3 00	2 75
100 lin.ft. 20-in	2 50	2 00	4 00	4 00
100 lin.ft. 24-in	3 00	2 50	5 00	5 00
Extra Heavy Cast Iron Soil Pipe:				
300 lin.ft. 3-in	1 00	50	50	3 00
500 lin.ft. 4-in	1 50	80	60	3 50
1,000 lin.ft. 5-in	1 80	1 00	80	3 75
2,000 lin.ft. 6-in	2 00	1 25	1 20	4 00
Cast Iron Pipe Furnished:				
250 net tons bell and spigot straight	60 00	70 00	56 00	80 00
75 net tons bell and spigot special castings	120 00	120 00	100 00	125 00
25 net tons, high-pressure straight	80 00	95 00	100 00	120 00
10 net tons high-pressure special castings	160 00	175 00	180 00	200 00
5 net tons high-pressure cast steel special castings furnished	300 00	220 00	300 00	350 00
Laying and Taking Out Cast Iron or Steel Pipe:				
300 net tons laying bell and spigot pipe, spec. cast and fittings	30 00	50 00	18 00	40 00
50 net tons laying high-pressure pipe, spec. cast. and fittings	35 00	50 00	20 00	60 00
25 net tons taking out bell and spigot pipe, spec. cast. and fittings	24 00	15 00	7 00	30 00
50 net tons, taking out high-pressure pipe, spec. cast. and fittings	35 00	15 00	7 00	50 00
100 net tons, taking out and disposing of 48-in. steel pipe	35 00	20 00	7 00	20 00
Bell End Water Gate Valves:				
2 36-in. geared gate valve	1,000 00	900 00	920 00	1,200 00
3 30-in. geared gate valves	800 00	600 00	600 00	850 00
1 24-in. gate valve	600 00	400 00	300 00	550 00
2 20-in. gate valves	375 00	260 00	240 00	300 00
2 16-in. gate valves	300 00	180 00	130 00	200 00
4 12-in. gate valves	225 00	100 00	70 00	110 00
4 10-in. gate valves	150 00	72 00	50 00	90 00
4 8-in. gate valves	100 00	50 00	50 00	50 00
6 6-in. gate valves	75 00	30 00	35 00	35 00
5,000 lb. wrought iron or steel pipe, any size	.10	.15	.08	10
Wrought Iron or Steel Pipe Conduit:				
5,000 lin.ft. ¾-in. or 1-in. enameled conduit	.25	.30	.30	25
2,000 lin.ft. 1¼-in. or 1½-in. enameled conduit	.40	.36	.40	40
500 lin.ft. 2½-in. galvanized conduit	.60	60	.60	70
5,000 lin.ft. 3-in. galvanized conduit	.70	.90	.80	80
1,000 lin.ft. 3½-in. galvanized conduit	1 00	1 10	1 00	1 00
100 net tons hauling pipe and fittings to or from city storeyard	2 50	3 00	2 00	10 00
50,000 lb. miscellaneous iron castings	.08	.08	.08	10
60,000 duct ft. terra cotta ducts	.16	.15	.14	15
20,000 duct ft. relocating city ducts and conduits	1 00	.50	.20	1 00
Structural Steel:				
2,500,000 lb. steel columns	.06	07	.07	071
1,300,000 lb. steel I-beams used as columns	.06	.07	.07	071
5,300,000 lb. steel I-beams and channels in roofs and floors	.06	.07	.07	071
1,350,000 lb. riveted plate or lattice girders	.06	.07	.07	071
50,000 lb. riveted struts and miscellaneous steel work	.06	.07	.07	071
115,000 lb. tie rods, bolts, nuts, washers, dowels and anchor bolts	.06	.07	.07	071
100 net tons interlocking steel sheet piling	80 00	120 00	120 00	125 00
Steel Pipe Piles:				
100 vert.ft. 12-in	6 00	8 00	4 00	7 00
1,000 vert. ft. 15-in	7 50	10 00	6 00	7 50
910,000 lb. steel reinforcing rods and bars	.07	.06	.05	.05
10,000 lb. steel wire lath, forms and anchors	.25	.20	.20	15
2,000 sq.ft. steel ventilation gratings	1 50	2 50	80	2 00
130,000 sq.ft. painting steel work	07	10	05	07
7,200 sq.ft. safety treads	1 50	1 50	2 50	1 60
3,000 sq.ft. vault lights	1 50	1 75	1 50	1 65
Cartway Paving:				
22,000 sq.yd. asphalt	4 00	4 00	3 50	4 00
100 sq.yd. new wood block	4 00	4 50	4 00	5 50
100 sq.yd. new granite block	4 00	4 00	4 00	5 00
100 sq.yd. new vitrified block	4 00	4 50	4 00	5 00
Sidewalk Paving:				
2,000 sq.yd. granolithic	3 00	2 00	1 80	2 00
100 sq.yd. brick	3 00	2 00	1 00	2 50
1,200 sq.yd. flagstone	25	2 50	1 00	2 00
Curbing:				
200 lin.ft. 6-in. straight granite	1 60	2 00	1 50	2 00
500 lin.ft. 8-in. straight granite	2 40	2 50	2 30	2 50
100 lin.ft. 6-in. curved granite	3 00	3 50	2 40	3 50
200 lin.ft. 8-in. curved granite	4 00	4 00	2 70	4 00
500 lin.ft. steel edge concrete	75	1 00	1 25	1 50
4,400 lin.ft. resetting curb	30	30	25	1 00
$50,000 force account	30%	30%	25%	20%
Extended totals	$3,861,435	$3,495,018	$3,336,400	$3,491,912 50

SEWERS, NEW YORK, N. Y.

Bids were received by M. M. Marks, boro. pres., Municipal Bldg., for sewers and appurtenances in 1st Ave. between 95th and 106th St., and outlet sewers in 96th and 102nd St., between Harlem River and 1st Ave., from (A) James Pilkington, 3377 Sedgewick Ave., Bronx; (B) James O'Leary, 411 East 42nd St.; (C) Melrose Constr. Co., 147 East 125th St. The item bids were as follows:

	A	B	C
112 lin.ft. 5-ft. 3-in. x 8-ft. 6-in. concrete sewer	$50 00	$55 00	$45 00
884 lin.ft. 5-ft. 3-in. brick sewer	40 00	42 00	39 00
288 lin.ft. 4-ft. 9-in. brick sewer	30 00	36 00	29 00
262 lin.ft. 4-ft. 6-in. brick sewer	30 00	34 00	25 00
68 lin.ft. 3-ft. 6-in. concrete sewer	20 00	26 00	27 00
441 lin.ft. 3-ft. 6-in. concrete sewer	20 00	24 00	27 00
60 lin.ft. 4-ft. x 2-ft. 8-in. brick sewer	20 00	22 00	22 00
237 lin.ft. 4-ft. x 2-ft. 8-in. brick sewer	20 00	21 00	28 00
580 lin.ft. 3-ft. 6-in. x 2-ft. 4-in. brick sewer	20 00	26 00	18 00
228 lin.ft. 3-ft. 6-in. x 2-ft. 4-in. brick sewer	20 00	21 00	24 00
491 lin.ft. 3-ft. 6-in. x 2-ft. 4-in. brick sewer	20 00	21 00	24 00
278 lin.ft. 20-in. vitrified pipe sewer	12 00	10 00	14 00
262 lin.ft. 18-in. vitrified pipe sewer	10 00	9 00	11 50
262 lin.ft. 15-in. vitrified pipe sewer	8 00	8 00	9 50
653 lin.ft. 12-in. vitrified pipe sewer	6 00	8 00	8 50
438 lin.ft. 3-ft. 6-in. vitrified brick sewer	22 00	25 00	19 00
505 lin.ft. 12-in. vitrified pipe basin	5 00	3 75	2 80
500 lin.ft. 12-in. vitrified pipe basin drain	3 00	1 50	2 00
150 lin.ft. 6-in. vitrified pipe basin drain	30	1 50	1 40
1,600 lin.ft. abandon sewer fill		50	3 80
Overflow chamber No. 1	3,000 00	1,200 00	2,300 00
Overflow chamber No. 2	2,000 00	3,000 00	2,300 00
65 manholes	60 00	100 00	50 00
457 spurs	25	5 00	1 40
9 receiving basins F. or G	200 00	200 00	235 00
Inlet basin C	200 00	100 00	100 00
11 receiving basins, altered	100 00	60 00	100 00
25 cu.yd. earth excavation	2 00	2 00	3 00
50 cu.yd. rock excavation	4 00	5 00	5 00
34 cu.yd. rock excavation	4 00	5 00	5 00
300 cu.yd. additional concrete	6 00	01	8 00
5 cu.yd. additional concrete	6 00	01	7 00
5 cu.yd. additional concrete	6 00	01	6 00
25 cu.yd. additional concrete	6 00	01	6 00
10 cu.yd. rubble masonry	3 00	01	6 00
5 cu.yd. dry rubble masonry	3 00	01	4 00
100 cu.yd. stone ballast	2 00	2 50	2 00
10 cu.yd. additional brick masonry	15 00	13 00	14 00
130,000 ft.b.m. timber foundation	40 00	30 00	50 00
300,000 ft.b.m. timber bracing	25 00	20 00	35 00
4,500 lb. steel reinforcing	05	06	08
29,000 lin.ft. piles	30	25	35
3,853 sq.yd. pavement	1 00	1 00	2 00
8,865 sq.ft.b.s. flag sidewalk	05	08	08
2,718 sq.ft. concrete sidewalk	10	17	25
600 lin.ft. curb restored	05	50	25
Extended totals	$177,364	$188,611	$196,873

SEWER, ERIE, PA.

Bids were received by city Apr. 6 for storm sewer and appurtenances from (A) F. G. Diefendorf, Erie; (B) J. McCormick & Bro., Erie; (C) W. Bancroft, Erie; (D) Pitt Construction Co., Inc., Fulton Bldg., Pittsburgh, $112,590. The item bids of the 3 lowest bidders were as follows:

	A	B	C	D
140 ft. 4-ft. x 5-ft. concrete culvert	$17 80	$16 00	$20 00	$27 00
120 ft. 40-ft. concrete sewer	6 50	12 00	15 00	14 00
5,840 ft. 36-in. tile sewer	6 40	7 25	7 25	12 00
3,220 ft. 30-in. tile sewer	4 33	3 50	3 00	7 50
700 ft. 24-in. tile sewer	2 65	3 25	2 75	4 70
140 ft. 12-in. tile sewer	1 00	1 25	1 00	1 25
1,100 ft. 9-in. tile sewer	75	1 00	75	1 20
300 ft. 6-in. tile sewer	1 00	1 00	20	90
Concrete outlet (lump sum)	915 00	700 00	1,000 00	1,650 00
Manholes, etc	3,325 00	2,180 00	4,110 00	6,195 00
Extended totals	$61,950	$64,520	$64,660	$112,590

Louis L. Brown Co., Inc., have just opened offices at 30 Church St., New York City, and will specialize in foundation by open and pneumatic methods, shoring and underpinning, concrete, masonry and timber construction, etc. The firm is comprised of Louis L. Brown, formerly vice-president of the Foundation Co., and James H. Small, Jr., formerly chief engineer of Patrick Ryan Constr. Corp.

Thomas G. Bush & Co., sales agents and special contractors, Paulsen Building, Spokane, have arranged with the Hodson-Feenaughty Co. to handle the road machinery and contractor's equipment manufactured by the Austin-Western Road Machinery Co. and its associate companies.

The Blaw Steel Construction Company has opened Pacific Coast offices at San Francisco in the Rialto Building with Edward M. Ornitz in charge.

The Braemer Air Conditioning Corporation of Philadelphia announces the opening of a New York Office at 90 West St. with G. P. Uppington as District Manager. Mr. Uppington is a Graduate Engineer with 11 years' practical experience in heating, ventilating, air-conditioning and sales work, and well qualified for his new position.

The Elgin Sales Co., 605 South Dearborn St., Chicago, and 140 West 38th St., New York, has taken over the selling agency of the Elgin Street Sweeper Co., maker of motor-driven outfits. George C. Dodge is in charge at New York and A. M. Anderson at Chicago.

S. B. Newman and M. F. Cavallon, who have been associated with the Master Builders Co., announce that they have entered into business to sell building products under the name of the Newman-Cavallon Co., Inc., 8 West 40th St., New York, N. Y.

W. T. O'Brien, manager of the Railway Equipment Co., Portland, Oregon, announces his plant will be moved to a site recently secured in Linnton.

J. L. Stannard, Cons. Engr., announces the removal of his office from the Corbett Bldg. to 504-5-6 Selling Bldg., 6th and Alder St., Portland, Ore.

PREPAREDNESS

The effect of the preparations for war is beginning to appear in the purchases of the Navy Department, though with the exception of a few materials and articles the purchases have not yet passed beyond the ordinary routine requirements. Awards have been made for nearly 200 of the submarine chasers or patrol boats for which bids were opened on Mar. 31. The average price is about $45,000 and the awards have been split up among a large number of bidders, no bidder receiving more than 20. An additional number will be built at the New York Navy Yard. Heavy duty gasoline engines are being ordered for these boats, the type selected being that known as the "Standard." The engines will be installed by the Government.

A large order for steel nets for use against submarines was placed with the American Steel and Wire Co. at $625 each for 100. The type of net is smaller than that recently ordered from the same company. An order for 1,500,000 lb. of trinitrotoluol was divided before the Burton-Richards Co. and the E. I. du Pont de Nemours Powder Co., the price being about 36c. a pound. A very large emergency order for alcohol for immediate delivery to Indian Head Naval Proving Ground was placed with James A. Webb & Co., New York, at 50.7c. per gallon, which is much below the previous prevailing price on alcohol for naval use.

Bids were also opened for a large quantity of brass, copper and bronze, in angles, ingot and pipe. Most of this material is desired for construction of vessels.

The Bureau of Yards and Docks is purchasing without advertising in what is known as open market purchase a large quantity of transportation material, such as cars, trucks, locomotives and cranes, deliveries being desired at the various yards.

The Bureau of Ordnance has opened bids for a large number of shell ranging from the armor-piercing 16-in. shell down to 1-pounders. No awards have been made. They have also opened bids for 1,470,000 copper cartridge cases for 4-in., 3-in. and 1-pounder guns. Awards have not been made but will aggregate several million dollars. Bids are now asked for copper stowage boxes and wooden ammunition cases for shell and powder which will call for the execution of large contracts.

Bids have been opened for the construction of 48 submarine torpedo boats, but as usual competition is confined to the Electric Boat Co. and the Lake Torpedo Boat Co., with a bid from the California Shipbuilding Corporation on the Lake design. The prices quoted range from $1,300,000 to $1,500,000.

In the Army, owing to the failure of Congress to act upon the Appropriation Bill, comparatively little emergency purchasing is being done, but plans are being made for stimulating purchasing as soon as the money is available.

Much interest is being taken in the plans of the Shipping Board to construct a large number of wooden vessels of about 2000 tons each but little progress is being made towards anything definite in the accomplishment of this scheme.

TRADE PUBLICATIONS

Industrial Plants. The Foundation Co., 233 Broadway, New York. Booklet; pp. 16; 5½ x 8½ in.; illustrated.

Steam (Vacuum) Pumps, Foot Valves, Quick-Cleaning Strainers. The Emerson Pump and Valve Co., Alexandria, Va. Catalog; pp. 56; 6 x 9 in.; illustrated.

Spraco Products. The Spray Engineering Co., 93 Federal St., Boston, Mass. Bulletin No. 501; pp. 16; 8 x 11 in.; illustrated. This is a condensed bulletin of the different products of this company, including spray-cooling, air-washing and paint-spraying equipment, park sprinklers, flow meters, nozzles.

Cranes. Whiting Foundry Equipment Co., Harvey, Ill. Catalog No. 127; pp. 48; 6 x 9 in.; illustrated.

Pressed Steel Platforms for Hand and Power Elevating Trucks. The McMyler-Interstate Co., Cleveland, Ohio. Bulletin No. 37; 8 x 11 in.; illustrated.

Deep Well Pumps, Tube Well Supplies. A. D. Cook, Lawrenceburg, Ind. Catalog No. 14; pp. 68; 7 x 10 in.; illustrated.

Concrete Mixers. T. L. Smith Co., Milwaukee, Wis. Catalog 402; pp. 48; 6 x 9 in.; illustrated. Catalog includes tables of capacities based on wet-batch rating of the National Association of Mixer Manufacturers.

Iroquois Asphalt Repair Wagon. The Barber Asphalt Paving Co., Buffalo, N. Y. Bulletin No. 5; pp. 4; 8 x 10½ in.; illustrated.

Concrete Mixers. The Jaeger Machine Co., Columbus, Ohio. Catalog; pp. 32; 8½ x 11 in.; illustrated.

Duplex Steam Pumps. Dean Bros. Steam Pump Works, Indianapolis, Ind. Circular No. 104; pp. 8; 8½ x 11 in. This gives details of design and construction of pump.

Iroquois Mastic Mixing Machine. The Barber Asphalt Paving Co., Buffalo, N. Y. Bulletin No. 4; pp. 8; 8 x 10½ in.; illustrated.

Trench Excavators. The Parson Co., Newton, Iowa. Folder containing bulletins of different models; 9 x 12 in.; illustrated.

Air Lift Pumping System. Sullivan Machinery Co., 122 South Michigan Ave., Chicago, Ill. Bulletin No. 71-C; pp. 36; 6 x 9 in.; illustrated.

Straight Line Air Compressors. Sullivan Machinery Co., 122 South Michigan Ave., Chicago, Ill. Bulletin No. 75-B; pp. 16; 6 x 9 in.; illustrated.

Tables Giving the Quantities of Material Required in Concrete Construction. The Sandusky Cement Co., Cleveland, Ohio. Booklet; pp. 12; 3½ x 6 in. This booklet ought to be of value to those interested in concrete construction.

The Watters Grab Bucket. Whiting Foundry Equipment Co., Harvey, Ill. Catalog No. 126; pp. 12; 6 x 9 in.; illustrated.

Parker Rust-Proofing Process. Parker Rust-Proof Co. of America, Detroit, Mich. Catalog. Pp. 48; 8 x 10½ in.; illustrated. Describes the process for depositing a protecting layer of iron phosphate.

Ingersoll-Rogler Straight-Line Dry Vacuum Pumps. Ingersoll-Rand Co., 11 Broadway, New York. Form No. 3037. Pp. 24; 6 x 9 in.; illustrated.

Imperial Duplex Dry Vacuum Pumps. Ingersoll-Rand Co., 11 Broadway, New York. Form No. 3038. Pp. 24; 6 x 9 in.; illustrated.

Standardized Power. Novo Engine Co., Lansing, Mich. Pamphlet; pp. 24; 6 x 9 in.; illustrated. This describes the Novo gas engines, air compressors, hoists, pumping and sawing outfits.

A Record Order for Wire Mesh Reinforcing is announced by Albert Oliver & Son, Inc., sales agents for the Clinton Wire Cloth Co.'s structural products. The Fireproof Contractors' Corporation has ordered 1,060,000 sq.ft. of Clinton electrically welded fabric for the floors and roof of the new Commodore Hotel, New York City. The date of first delivery is June 1, and it is expected that the entire order will be completed in five months from that date.

SEARCHLIGHT SECTION

PROPOSALS

Bids received until May 3, 1917.

Dam Raising

OFFICE OF THE BOARD OF STREET AND WATER COMMISSIONERS OF THE CITY OF NEWARK.
City Hall,
Newark, N. J., April 14, 1917.

Sealed proposals will be received from 3:15 to 3:30 o'clock P.M. on Thursday, May 3, 1917, at a public meeting of the Board of Street and Water Commissioners to be held at its office in the City Hall, Newark, New Jersey, at said time, for the

RAISING OF THE DAM OF THE OAK RIDGE RESERVOIR,

for the Water Department of the City of Newark, situated near Oak Ridge, Passaic County, New Jersey, and the bids for said work will be opened and publicly read at the last-named hour.

The following is a statement based upon the estimate of the Engineer of the amount of work to be done and the materials to be furnished in the construction and completion of said work, and upon which the several bids will be computed, tested and canvassed by the quantities mentioned:

6450 cu.yds. of earth excavation 0 to 4 feet deep;

150 cu.yds. of earth excavation 4 to 20 feet deep;

1035 cu.yds. of rock excavation to the depths shown on the plans;

43,500 cu.yds. of borrowed earth;

50 cu.yds. of clay puddle;

4000 cu.yds. of slope paving to be removed;

900 cu.yds. of concrete deporited without the use of forms;

3235 cu.yds. of concrete deposited in forms;

3260 lbs. of sheet lead;

200 lineal feet of six (6) inch agricultural tile;

Removing and replacing deck of gatehouse (a lump sum);

Furnishing and erecting a stairway (a lump sum).

These quantities are approximate only, being given as a basis for a uniform comparison of bids, and the board does not expressly or by implication agree that the actual amount of work will correspond therewith.

Each proposal must be inclosed in a sealed envelope indorsed "Proposal for the Raising of the Oak Ridge Dam," with the name of the bidder and directed to the Board of Street and Water Commissioners of the City of Newark, New Jersey.

The prices of bidders must be written in words and also stated in figures in the form of bid, and all bids will be considered as informal which do not contain prices set oposite all the items which are called for in the form of bid.

Proposal must be accompanied by the consent in writing of two sureties, residents of Essex County, New Jersey, or a surety company authorized to do business in New Jersey, who shall qualify as to their responsibility in the amount of the proposal, and agree to become sureties for the faithful performance of the contract, if awarded.

The plans and specifications for the proposed work can be examined at the office of the Engineer and Superintendent of the Bureau of Water of the Board of Street and Water Comissioners at No. 317 Halsey Street. Copies of the plans and specifications may be obtained upon the deposit of a certified check for $10. This check will be returned to the bidder upon the return of the plans and specifications on or before the day fixed for the receipt of bids.

Blank form of proposals which must be used in submitting bids will be furnished upon application to said office.

The contract is to be awarded to the lowest bidder, the board reserving the right to reject any or all bids.

INFORMATION FOR BIDDERS.

The work is located at the lower end of the Oak Ridge Reservoir in the Township of Jefferson, Morris County, and the Township of West Milford, Passaic County, New Jersey. The nearest railroad station is Oak Ridge on the New York, Susquehanna & Western Railroad.

The work to be done consists of building a small dam, a concrete overflow dam, concrete retaining walls and making such alterations in the present dam and gatehouse that the flow line of the reservoir may be raised ten feet. Bidders are advised to visit the site of the work and satisfy themselves as to the character of the ground and the work to be done. An employee of the Board of Street and Water Commissioners will be on the site of the work for twelve (12) days after the date of this advertisement, with the exception of Sundays, between the hours of 8 A.M. and 4 P.M., to show the bidders the location of the various parts of the work.

The sanitary regulations and the provisions relating thereto as set forth in paragraphs J, K, L and M of the contract and specifications, are particularly brought to the attention of bidders.

By direction of the board.
MORRIS R. SHERRERD,
Chief Engineer.

Official Proposals

Price, $3.60 an inch—Copy can be received until Wednesday, 10 a. m. for issue mailed the next day

Bids received until Apr. 20, 1917.

Concrete Pavement

Sarnia, Ont., Canada.

Sealed Tenders addressed to the City Engineer, Sarnia, Ontario, will be received up to 5 o'clock P.M., the 20th day of April, 1917, for the construction of a 30-ft. Concrete Pavement on the London Road from Christina to Russell Streets, in the City of Sarnia.

Plans, Profile, Specifications and Forms of Tenders may be seen at the office of the City Engineer, City Hall, Sarnia.

The lowest or any Tender not necessarily accepted.

JOHN A. BAIRD, City Engineer.
Sarnia, 12th April, 1917.

PROPOSALS

Bids received until Apr. 26, 1917.

Earth Dam, Etc.

Fitchburg, Mass.

Sealed bids or proposals for building an earth dam, 225 ft. long, with a maximum height of 30 ft. with a reinforced concrete curtain wall, spill way, gate house, iron pipe outlet and appurtenances; also the reconstruction of a portion of the town road, and building a concrete culvert thereon; addressed to the Board of Water Commissioners, Fitchburg, Mass., and endorsed, "Proposals for Compensating Reservoir," will be received at the office of the Board, City Hall, Fitchburg, until 2 p.m. on Thursday, the 26th day of April, 1917.

At this time and place said proposals will be opened and read in public.

Each bid must be accompanied by a certified check drawn on a National bank or Trust Company, established in the state of Massachusetts, or city of New York, for $1000, payable to the City of Fitchburg. The successful bidder will be required to furnish a bond in the sum of $10,000 with a Surety Company, satisfactory to the Commissioners. Detailed drawings, form of contract, and specifications may be obtained at the office of the Water Commissioners, or at the office of the Commissioner of Streets and Engineering, Fitchburg. A deposit of $5 will be required on plans and specifications taken from either office. Such deposit will be refunded upon the return of the plans and specifications.

The Water Commissioners reserve the right to reject any or all bids or to accept any bid which they deem to be to the interest of the City of Fitchburg.

Signed: THOMAS C. SHELDON,
ARTHUR A. TRAIN,
Water Commissioners.

GUY H. CHASE,
Comr. of Streets and Engineering.

Bids received until May 5, 1917.

Sewer Construction

Phoenixville, Pa.

The Borough of Phoenixville, South District, through its Sewer Committee, will receive bids until Saturday Evening, May 5th, 1917, at 8 o'clock, for the construction of a 24-in. sewer on Gay Street, Phoenixville, Pa., from Church Street to French Creek, a distance of approximately Nine Hundred and Eight Feet (908). Plans and specifications may be seen at the office of C. H. Keeley, Borough Clerk, North Main Street, Phoenixville, Pa. The Committee reserves the right to reject any or all bids.

CHAS. F. BADER,
E. A. BARKLEY,
JONATHAN DAVIS,
Sewer Committee.

Bids received until May 8, 1917.

Brick Paving

Vincennes, Ind.

Knox County will receive bids May 8 for 43,000 sq.yds. Brick Paving, 6 miles Rolled Stone Roads and 5½ miles Gravel Roads.

WINN H. REEL,
County Engineer, Vincennes, Ind.